

JOURNAL
OF THE
ANTHROPOLOGICAL INSTITUTE
OF GREAT BRITAIN AND IRELAND.

ANNUAL GENERAL MEETING.

JANUARY 26TH, 1904.

H. BALFOUR, M.A., *President, in the Chair.*

The Minutes of the last Annual General Meeting were read and confirmed.

The PRESIDENT declared the ballot open, and appointed, as Scrutineers, the Reverend R. A. BULLEN and Mr. T. V. HOLMES.

The TREASURER presented his Report for the year 1903 (p. 8).

On the motion of Dr. HADDON, seconded by Mr. DAMES, the Report was accepted.

The SECRETARY read the Report of Council for the year 1903 (p. 2).

On the motion of Mr. DAMES, seconded by Sir THOMAS HOLDICH, the Report was accepted.

The PRESIDENT delivered his Annual Address (p. 10).

The SCRUTINEERS gave in their Report, and the following were declared to be duly elected as Officers and Council for the year 1904:—

*Report of the Council for the year 1903.**President.*—H. Balfour, Esq., M.A.*Vice-Presidents.*

E. S. Hartland, Esq., F.S.A.

Col. Sir T. H. Holdich, K.C.M.G.,
K.C.I.E., C.B.

R. B. Martin, Esq., M.P.

Hon. Secretary.—T. A. Joyce, Esq., B.A.*Hon. Treasurer.*—J. Gray, Esq., B.Sc.*Council.*

Sir W. S. Church, M.D., P.R.C.P.

O. M. Dalton, Esq., M.A., F.S.A.

M. L. Dames, Esq.

J. Edge-Partington, Esq.

A. J. Evans, Esq., M.A., LL.D., F.R.S.,
F.S.A.

E. N. Fallaize, Esq., B.A.

J. G. Frazer, Esq., D.Litt., D.C.L.

Prof. W. Gowland, F.S.A.

Baron A. von Hügel, M.A.

Sir H. H. Johnston, G.C.M.G., K.C.B.,
D.Sc.

A. Keith, Esq., M.D.

A. L. Lewis, Esq., F.C.A.

D. Randall-MacIver, Esq., M.A.

C. S. Myers, Esq., M.D.

Prof. W. M. F. Petrie, D.C.L., LL.D.,
F.R.S.

R. H. Pye, Esq.

S. H. Ray, Esq.

W. W. Skeat, Esq., M.A.

Sir R. C. Temple, Bart., C.I.E.

Prof. Arthur Thomson, M.A., M.B.

Dr. A. C. HADDON proposed, and Mr. E. W. BRABROOK seconded, that a cordial vote of thanks be given to the President, and that he be requested to allow his Address to be printed in the *Journal* of the Institute.

On the motion of Sir T. HOLDICH, seconded by the SECRETARY, a vote of thanks to the outgoing members of Council was passed.

A vote of thanks to the Scrutineers was passed on the motion of Mr. F. W. RUDLER.

REPORT OF THE COUNCIL FOR THE YEAR 1903.

The Council is able to report another year of steady progress. In the following table is expressed the numerical gains and losses of the Institute:—

	Honorary Members.	Corre- sponding Members.	Local Corre- spond- ents.	Ordinary Members.		Total Ordinary	Total Member- ship.
				Compounding.	Subscribing		
1 Jan., 1903 ...	44	13	18	72	250	322	397
Less ...	— 1	— 3	— 3	— 1	— 10	— 11	— 18
Since elected ...	2		4	3	26	29	35
Since transferred	1	— 1					
1 Jan., 1904 ...	46	9	19	74	266	340	414

A deduction of three units should be made from the figures expressing the total membership, since three ordinary Fellows have undertaken the duties of Local Correspondents, and are also reckoned under that head. This will give a total membership of 411 as against 397 of last year.

Among the losses which the Council have to deplore are Dr. Sophus Ruge of Dresden, a Corresponding Fellow, Sir Charles Nicholson, Mr. J. Allen Brown, Mr. Danby P. Fry and Mr. F. A. Haserick.

Sir CHARLES NICHOLSON, D.C.L., LL.D., the oldest baronet in the Kingdom, died on November 8th, shortly before his ninety-fifth birthday. He was educated at Edinburgh University, where he took his degree of M.D. in 1853. In 1854 he emigrated to New South Wales, in the first Legislative Council of which he represented Port Philip, later rising to the position of Speaker, which he held for eleven years. In 1858 he became a Fellow of the Ethnological Society, and, after the formation of the Anthropological Institute, he was a contributor to the *Journal*. Among his other works were various official papers and reports, besides articles which appeared in the *Transactions of the Royal Society of Literature*, of which Society he was Vice-President.

Mr. JOHN ALLEN BROWN,¹ son of Mr. John Brown, arctic chronicler and one of the founders of the Ethnological Society, is best known as the author of *Palæolithic Man in North-West Middlesex*, a book which is based mainly upon his observations of the implement-bearing gravels and brick earths of Ealing. In him the Institute loses one of its most frequent and valued contributors on the subject of flint implements, of which he possessed a large collection.

The Council cannot pass over without mention the death of Mr. HERBERT SPENCER,¹ through which the intellectual world is deprived of one of its most eminent leaders, and England of one of her most profound thinkers. Though he was never a Fellow of the Institute, his life's work was distinctly anthropological in character, and in 1875 he read a paper before the Fellows "On the Comparative Psychology of Man," which was afterwards published in the *Journal*.

Mr. Spencer's contribution to the sciences of Biology, Psychology and Sociology are too well known and appreciated to need more than passing mention; indeed his indication that in Evolution might be found the explanation of most Biological problems, directly prepared the way for Darwin's *Origin of Species*.

The Council join the rest of the civilized world in deploring the loss of one of the most brilliant intellects which have graced the history of British philosophy.

RESIGNATION OF OFFICERS.

The year 1903 has unfortunately been marked by the resignation of two officers, both of whom during their periods of office have rendered distinguished service to the Institute and, through the Institute, to the cause of Anthropology.

¹ See Obituary Notice, *Man*, 1903, 104.

Mr. J. L. Myres, whose energy and devotion as Honorary Secretary are well known to all the Fellows, sent in his resignation on March 14th, and the Council passed the following unanimous resolution:—"That the Council expresses its regret at the resignation by Mr. Myres of his office, which he has filled with so much distinguished ability and with entire devotion to the interests of the Institute; and offers him its earnest thanks for his efficient labours." It is unnecessary to enumerate at length the great services which Mr. Myres has rendered to Anthropology during his Secretaryship; the immense progress made by the Institute, particularly in the matter of its publications, during his term of office, bears ample witness to the success of Mr. Myres' unwearied efforts to promote its prosperity.

The Council wish to take this opportunity of once more placing on record their gratitude for the energy and devotion which Mr. Myres displayed in furthering the interests of the Institute and in giving wider extension to the sphere of its activity; and their extreme regret that he felt it necessary to withdraw his valuable services.

The Council regret that Mr. Lewis has communicated his intention of retiring from the post of Treasurer at the end of the official year.

Mr. Lewis, whose membership dates from 1866, was elected Treasurer in 1887, and during seventeen years he has placed his exceptional professional abilities at the service of the Institute, and has exercised a watchful supervision over its finances. He has remained at his post during more than one period of difficulty, imparting an element of stability through a period of inevitable change. Now that at last he contemplates retirement the Council wish to express their appreciation of his long and faithful service and to offer him their grateful thanks for the immense amount of time and labour which he has devoted to the multifarious and complicated requirements of so important a post during so protracted a period.

MEETINGS.

During the year ending 31st December, 1903, eleven ordinary meetings were held, in addition to two special meetings, viz.:—The Huxley Memorial Lecture, and a visit to the excavations at Silchester.

The visit to Silchester took place on July 18th. The journey was broken at Reading, where the Silchester Collection in the Museum was inspected. At Silchester the party was met by Mr. Mill Stephenson, who was in charge of the excavations, and who kindly conducted the members over the site. The inspection of the excavations was unfortunately marred by the inclement weather.

HUXLEY MEMORIAL LECTURE.

The fourth Huxley Memorial Lecture was delivered on October 16th, 1903, in the Lecture Theatre of Burlington House, by kind permission of the First Commissioner of Works, the President of the Institute in the chair. The lecturer

Prof. Karl Pearson, LL.B., F.R.S., took as his subject "On the inheritance in Man of Mental and Moral Characters, and its relation to the Inheritance of Physical Characters," and illustrated his discourse by numerous diagrams. At the close of the Lecture the President handed Prof. Pearson the Institute's Huxley Memorial Medal, in recognition of his services to Anthropological Science.

PUBLICATIONS.

With regard to publications, two half-yearly parts of the *Journal* have been published, viz.:—Vol. XXXII. 2 (July—December, 1902), and Vol. XXXIII. 1 (January—June, 1903). Both these parts have maintained, both as regards matter and illustrations, the high standard characteristic of the last few years. Though the proceeds from sales show a slight decrease as compared with those of 1902, the Council have no reason to believe that the sale of the *Journal* shows any signs of falling below the average.

With regard to *Man*, twelve monthly parts have been issued during the year under review, of which six have contained supplements. The Council are happy to report that for this year *Man* may be regarded as self-supporting.

In addition to the above, copies of the Huxley Memorial Lecture were issued at the price of 1s.; and the popularity of the lecture may be gauged by the fact that the entire edition was sold within three weeks.

With regard to the British Section of the Anthropological Volume of the International Catalogue of Scientific Literature, for which the Institute has undertaken the responsibility, the volume for 1901 has been issued, and that for 1902 is now in the press.

LIBRARY.

The chief disadvantage under which the Library labours, is the smallness of the grant out of which the expenses relative to binding and arrears have to be defrayed. However, in this department also the Council is able to make a satisfactory report.

The number of periodicals received in exchange for the *Journal* or for *Man*, has been increased by two—one Foreign and one British; but the acquisition of books and pamphlets presented by publishers or authors shows a slight decrease. The Council is, however, of the opinion that this decrease is only temporary, and that as soon as the value of the International Catalogue as an advertising medium is recognized by publishers, the list of additions year by year will be considerably augmented.

That the usefulness of the Institute's Library is acquiring recognition beyond the limits of the Society, is plain from the fact that a number of applications, made by non-members, to employ it as a means of reference have been granted by the Council.

ANTHROPOLOGICAL INSTITUTE OF

Receipts and Payments

	RECEIPTS.	£ s. d.	£ s. d.	£ s. d.
BALANCES in hand, 1st January, 1903 :—				
Cash at Bank	106 13 10			
Cash in Hand	2 17 6			
Cash in Hand ; Petty	5 2 6			
			114 13 10	
Less Balances owed as per 1902 Account :—				
Excursion Account	1 14 10			
Library Fund	13 2 3			
"Man," 1902 Account (Subscriptions)	4 15 10			
"Anthropological Notes and Queries"	27 12 0			
Hobley's "Uganda"	6 11			
			47 11 10	
				67 2 0
SUBSCRIPTIONS :—				
Two Life Subscriptions at £21		42 0 0		
For the year 1903		444 16 0		
Arrears		31 10 0		
For the year 1904 in advance		18 18 0		
			537 4 0	
SALE OF JOURNALS		123 8 5		
SALE OF HUXLEY LECTURES		2 18 6		
			126 6 11	
ADVERTISEMENTS in <i>Journal</i>			3 2 0	
DIVIDENDS for one year on Metropolitan Consolidated				
3½ per cent. Stock (less Income Tax)			14 17 10	
SALE of £200 of the above Stock, less expenses of sale			209 4 9	
LIBRARY FUND :—				
Balance, 1st January, 1903, as above		13 2 3		
Grant to (as per contra)		10 0 0		
			23 2 3	
Books bought	7 10 0			
Binding	5 2 0			
Sundries (Petty Cash)	13 1			
			13 5 1	
				9 17 2
"MAN," 1902 (Subscription Account), Balance due 1st				
January, as above		4 15 10		
Less Cash paid		4 15 10		
"ANTHROPOLOGICAL NOTES AND QUERIES" :—				
Balance in Hand, 1st January, 1903, as above		27 12 0		
Received during year		9 5 8		
			36 17 8	
"MAN," 1903 :—				
*Due for Printing (as per contra)		78 2 9		
*Due for illustrations (as per contra)		4 0 0		
Unexpired Subscriptions (Proportion)		7 6 6		
			89 9 3	

£1,094 1 7

* These are not receipts, but are brought in here to enable a full account of the working of *Man* for the year to be given on the other side.

23rd January, 1904.

GREAT BRITAIN AND IRELAND.

for the Year 1903.

	PAYMENTS.	£ s. d.	£ s. d.	£ s. d.
RENT (including Coal, Gas, and Electric Light for one year to Michaelmas, 1903)				135 0 0
"MAN" for 1902 (as part of <i>Journal</i> for that year, including Authors' and Publishers' and Exchange Copies, and postage thereon)				114 6 10
JOURNAL, Vol. XXXII, Jan.-Dec., 1902 (including Authors' Copies and Exchanges)		394 3 0		
Less received for Plates, etc.		28 17 8		
		<hr/>		
		365 5 4		
Add "Man" for 1903 (including Authors' and Publishers' Copies and Exchanges)		141 2 0		
		<hr/>		506 7 4
"MAN" for 1903 :—				
Printing, etc., paid for	130 1 9			
Printing not paid for (as per contra)	78 2 9			
Illustrations not paid for (as per contra)	4 0 0			
Postage	9 13 0			
	<hr/>			
	221 17 6			
Less :—	£ s. d.			
Carried to Journal Account	141 2 0			
Postage on Authors' and Publishers' Copies and Exchanges, charged to Postage Account ..	4 11 4			
Received for Blocks	16 0			
Received for Copies (less proportion of Subscriptions unexpired)	66 14 5			
Received for Advertisements	2 1 0			
	<hr/>			
	215 4 9			
				6 12 9
HOBLEY'S "UGANDA" :—				
Paid for Printing		37 10 6		
Less Balance at credit 1st January (as per contra)	6 11			
Less received during year for copies	5 11 0			
	<hr/>			
		5 17 11		
		<hr/>		
				31 12 7
SALARIES				109 1 0
HOUSEKEEPER :—				
Cleaning rooms, etc.				15 11 6
STAMPS AND PARCELS				49 8 2
PRINTING, STATIONERY AND TYPEWRITING				25 14 0
LANTERN MATERIALS				1 2 6
ADVERTISING				11 17 4
HUXLEY MEDAL AND MEETING				3 12 0
TRAVELLING EXPENSES				4 10 2
EXCURSION ACCOUNT (Silchester), Payments	9 10 0			
	£ s. d.			
Less Balance from 1902	1 14 10			
Received in 1903	7 10 7			
	<hr/>			
	9 5 5			
				4 7
GRANT TO LIBRARY (as per contra)				10 0 0
INSURANCE, DUPLICATOR AND SUNDRIES				4 17 6
				<hr/>
				1,029 18 3
BALANCE at Bank	54 16 8			
Petty Cash in Hand	9 6 8			
	<hr/>			
				64 3 4
				<hr/>
				£1,094 1 7

Examined and found correct,

(Signed) JOHN GRAY, }
 RICHARD B. MARTIN, } Auditors.

TREASURER'S REPORT FOR THE YEAR 1903.

On the 31st December, 1903, the property of the Institute consisted of:—

	£	s.	d.
Books in the Library, considered to be worth...	300	0	0
Drawings, photographs, slides, etc., considered to be worth	100	0	0
Publications, copyrights and blocks, considered to be worth	400	0	0
Furniture, anatomical specimens, etc., considered to be worth	55	0	0
£300 Metropolitan Consolidated 3½ per cent. Stock, worth	309	0	0
Due for <i>Journals</i> , etc., about £20, considered to be worth	10	0	0
Arrears of subscriptions, £149 2s. 0d. taken at 40 per cent.	59	12	4
Balance at Bank	54	16	8
„ of Petty Cash	9	6	8
	<hr/>		
	£1,297	15	8

Against which there were liabilities consisting of:—

	£	s.	d.
Rent, etc., for one quarter...	33	15	0
Housekeeper and small sundries, say ...	7	0	0
Anthropological <i>Notes and Queries</i> ...	36	17	8
Harrison, for <i>Journal</i>	80	2	8
“ <i>Man</i> ,” Printing and Illustrations ...	82	2	9
„ Unexpired subscriptions... ..	7	6	6
Printing and Stationery	2	9	6
Library Fund	9	17	2
	<hr/>		
	259	11	3

leaving a surplus, if all our property were sold,

estimated at £1,038 4 5

but not allowing anything for liability to Life Members, or for the work already done on the number of the *Journal* now in the press.

It would, however, only be as a winding-up measure that we should sell our Library, furniture and publication stocks:

	£	s.	d.
and apart from them our assets were	442	15	8
against liabilities as already stated of	259	11	3
	<hr/>		
leaving a balance in our favour of	183	4	5

which, in my opinion, should be carefully reserved for any special emergency that may arise.

The receipts on Revenue Account for the year 1903 were £687 1s. 9d., being £60 9s. 2d. less than those for 1902, there having been only two life subscriptions received in 1903 as against five in 1902. Against this there is an increase of £45 16s. 0d. in the ordinary subscriptions (including arrears) received, but that is neutralised by a falling off in the *Journal* sales of almost equal amount.

The actual expenditure during the year was £947 15s. 6d., being £260 13s. 9d. more than the receipts from income, the difference being made up by the sale of £200 stock, which produced £209, and a reduction of the cash and bank balances of £50. This total includes £37 10s. 6d. paid for printing Hobley's *Uganda*, which we shall recover in course of time if we can sell the remaining copies. Increases in stamps, carriage, printing and salaries account for another £20 of the extra expenditure, but the remainder, amounting to more than £200, has been spent on the *Journal* (including *Man*). Last year I ventured to say that the cost of the *Journal* recording the proceedings for 1902, and of the numbers of *Man* for that year would not fall far short of £400. To-night I have to report that they have not fallen far short of £450. I have reason to hope, however, that the *Journal* for 1903 will not be so expensive, and that arrangements recently made will bring about a more effectual control of the expenditure in that direction.

A. L. LEWIS, *Honorary Treasurer.*

PRESIDENT'S ADDRESS.

THE RELATIONSHIP OF MUSEUMS TO THE STUDY OF ANTHROPOLOGY.

It has usually been the custom, on the occasion of our annual meetings, for the President to give in his address a *résumé* of the principal events of anthropological interest which have occurred during his term of office, and to pass in review the work done by the Institute during the past year. That the observance of this prevailing custom has been acceptable to the Fellows cannot, I think, be doubted. It may even be that it was originally intended that the President *should*, in this manner, sum up once a year the achievements and noteworthy features of the science which he represents, and that this was the primary *raison d'être* of the presidential address. At any rate, the numerous addresses which have been delivered by former Presidents having this theme for their basis, have amply justified this procedure, and have afforded eloquent testimony to the fact that, in able hands, a retrospect of the year's anthropological work may be presented in a form which for interest and instructiveness leaves nothing to be desired.

In recent years, the Annual Report of the Council has to some extent relieved the President of this duty, and, partly on this account, partly, too, no doubt, because, were I to follow on the accepted lines, I should dread a comparison of the clumsy efforts of my own pen with the able addresses of my distinguished predecessors, I have welcomed the precedent, established by some of the former occupants of the chair, of departing from the usual observance, and devoting the major portion of their addresses to some selected topic of general anthropological interest. I cannot but think that the President of the Institute is justified in asking leave to unburden his soul on such an occasion, provided that he is sanguine enough to believe that his views may be of some practical value in furthering the developmental progress of the science of Anthropology. In following the lead of those of my predecessors who have selected their own theme for their addresses, I readily yield to them the credit for having initiated a departure from normal procedure, together, of course, with the blame should any have been incurred.

That the general progress of Anthropology in our country has been maintained, cannot, I think, be denied, and, if its steps are slower than we could wish, at least the advance has been continuous and unchecked. Enough useful and interesting work has been done to show clearly what great advances might be made in this important science, were the funds available for its pursuit in any way proportioned to its needs. Fortunately, genuine enthusiasm is not lacking, and that may be

regarded as a certain sign of the healthy vitality of the science, which, if restrained, is at least unsubdued by the lack of adequate financial support.

Among the signs of an increasing appreciation of the value of anthropological investigations, may be mentioned the fact that there is an increasing number of workers in the field, and that the work of anthropologists is being more and more appealed to on matters not only of scientific research, but also of practical economical importance.

Reference should also be made, in this connection, to the recent action taken by the governing body of one of the colleges at Oxford, by which a fellowship, tenable for five years, has been given for anthropological research, a most gratifying recognition of the importance of this science.

The work of the Institute has gone on unchecked, and the publications have fully maintained their high standard. It is true that, in spite of an increasing membership, the income has not proved sufficient to meet all the expenses incurred, and that some capital expenditure has been unavoidable, so that it is clear that an increase in the membership, bringing an increased income, is most necessary, if we are to carry on adequately the useful work on which we are engaged, of collecting, recording, and marshalling the facts relating to Man's history and present status. If every two Fellows would enlist a single new one, the financial position would be most usefully improved, and the strain materially relieved. It is only asking each Fellow to assume a minimum responsibility to the extent of half a candidate, no very extravagant demand, in view of the importance of the result which would accrue.

I have to deplore the loss, during my year of office, of two valued colleagues, through their retirement from official posts. Early in the year Mr. Myres resigned the Secretaryship, which he had held with much benefit to the Institute, and to which he had devoted so much of his time and so great an activity. At the end of the year Mr. Lewis is not seeking re-nomination to the Treasurership, and thus retires from the important position which he has filled with devotion and courtesy during a great many years, ever mindful of the financial interests of the Institute. If it has not been his happy lot to be able to carry forward large and appropriate balances, by reason of the smallness of our income, at least, in his latest report, he has the satisfaction of recording the fact that our publication, *Man*, has been self-supporting during the past twelve months.

That the work of the Institute has progressed so favourably during the year is very largely due to the activity of the Secretary *ad interim*, Mr. Joyce, and the Assistant Secretary, Mr. Kingsford, and, last but not least, to Mr. Fallaize, who has generously given his valuable services in many ways, more especially to the work of bringing out the *Journal*. To one and all of these gentlemen I take this opportunity for offering the hearty thanks of a colleague, who, although, by the kindness of the Fellows, occupying a coveted and prominent position, has filled a far less important place than they in the machinery which drives the Institute along the path of progress.

Among the losses from the ranks of workers in the field of Anthropology, to

which reference has been made in the Council's Report, there is one name which stands out pre-eminently. I refer to Mr. Herbert Spencer, a giant among philosophical thinkers, and one who laboured unselfishly, and with complete devotion to his subject, since he consistently refused the many well-earned honours which were offered to him. Although, by the death of a man of such striking individuality of mind, a gap is left in the ranks which it will be impossible to fill, yet Herbert Spencer has left an indelible mark upon the literature of all time, and will always live in his works and in the school of thought over which his genius and individuality have been disseminated.

With these few references to past events, I will turn now to my main subject.

The two annual addresses delivered by my immediate predecessor in this chair, were devoted in a very practical manner to making clear the position, aims and requirements of Anthropology, on the one hand by means of a classification of the various aspects of the study, together with suggestions as to the means whereby the science may be developed, and, on the other hand, by offering a highly stimulating object lesson, based upon the development of Anthropological study, as it is being pursued in the United States of America, from which it must be admitted that the pursuit of this subject in our own country suffers from comparison with the achievements wrought by "the energy and enthusiasm of American anthropologists," who are backed up by the "liberality of enlightened business men." To money we must needs look for the sinews of scientific pursuits as of war, and enlightened liberality is a thing to be encouraged in every way. At the same time, it seems to me that, in certain directions, a vast amount might be done for Anthropology without necessarily involving any immediate serious increase in the funds at present available; though I firmly believe that, if successfully carried out, the very success of the scheme would react upon the liberality of fund providers, and, again, the stimulus of augmented resources would lead to a further increase in the efficiency of the work.

It is mainly to the museums of this country that I would appeal, and I would ask whether something cannot be done, in the direction especially of *individualization* and *co-operation*, to extend greatly the scientific value of these institutions, and, in so doing, to assist very materially in the advancement of Anthropology. I confine my remarks, of course, to museums which are either entirely or partially anthropological in character, using the term in its widest sense, to include all matters relating to the study of Man.

On the whole, we cannot complain as to the number of museums in the British Islands. They are, in fact, very numerous. Most of our principal cities possess at least one, while many of the smaller towns and suburbs also boast of a museum, often enough one which reflects great credit upon its founders and organizers. I do not wish to advocate any increase in their number. If anything, I would rather suggest a diminution, since one cannot blind oneself to the fact of their being a certain number of so-called "museums," which would but force a

groan from Calliope and her eight sisters, through the completeness with which they have failed to justify their existence as institutions worthy of the name. I do not wish to speak harshly of the happily few instances. Museums are frequently started with the best intentions by, or in response to, local enthusiasts, who, while they live, render the institution a success by their own individual efforts; but, as too often happens, no adequate permanent provision having been made for future maintenance, and for providing an efficient staff of workers, there is a tendency for such a museum to stagnate and decay after the death of its founder, whose place may not readily be filled by another self-sacrificing enthusiast. Enterprise begins to flag and apathy rules; the familiar "Cannibal club from the South Seas" languishes against its neighbour, which as likely as not is a stuffed "Egyptian ibis"; the label drops from the authentic "Dagger which killed Captain Cook" on to the unsuspecting "Turtle from the West Indies" immediately below, whose back it henceforth adorns. The museum becomes a mere scrap-heap of "curios," a burden and then an eyesore, and is apt, finally, to be handed over to the tender care of a committee *à discrétion* of moths, beetles, dust and damp, having full powers to dispose of the specimens as they think fit.

This is no exaggerated picture. Many a valuable, even unique, specimen has gone through these stages of devolution, and it is sad indeed to think how much valuable material has been lost to Science through this process of neglect, atrophy and decay. Often enough, it is true, it is only a certain portion of a museum which receives inadequate attention, other departments being developed and well cared for. The Curator may be a specialist, having naturally enough his own hobby, which he understands, and to which all his attention is devoted. We are none the less concerned, for, only too frequently, it is the Ethnological or Archaeological section which suffers.

This, however, is the gloomy side of the picture, and I gladly turn to the brighter aspects. I believe that the class of "museum" to which I have just referred, is rapidly disappearing, and that out of the ashes there will arise institutions which, even though they may be small, will take a definite place among the teaching units of our country. In response to the growing public interest in Science, which will have demanded their remodelling and re-juvenescence, they will play their part in further stimulating that interest by the quality of their exhibits.

One must pay a well-deserved tribute to that excellent organization, the Museums Association, which, through the medium of its meetings, discussions and published Report, has already done much towards promoting a healthy activity in the Museum World, and towards shaming out of existence any retrogressive tendencies. May its work prosper!

Our ethnological museums and collections play an important part in the education of the nation, but their influence may be enormously increased. With our Imperial and Colonial interests and responsibilities, the study of comparative and local ethnology is of prime importance to us, not only because we are

exceptionally favoured in regard to the material for that study, which lies ready to hand, by reason of our dominant position in many and varied regions of the world, inhabited by races in all stages of culture, but still more because the proper understanding of native races and their relationship to each other is a matter of vital interest to us, if we are to govern justly and intelligently the very heterogeneous people who come under our sway. Nor is this all. The great variety in the conditions of culture observable amongst the peoples and tribes of various regions, supplies us with a most valuable mass of material for tracing the developmental history of human culture in general. Gaps in the archaeological and historical record may, as is now fully recognized, frequently be filled by means of a comparative study of modern races, the study, in fact, of the "Past in the Present," to use Mitchell's happy phrase.

How, then, can our museums best assist in the advancement of the study of Man? I do not propose to attempt even to reply in full to this question, as this would take me too far afield; and I may well neglect all reference to the general principles of museum administration, the proper methods of exhibiting, labelling and preserving specimens, and so on. These are matters which have received much attention elsewhere at the hands of experts, and they fall outside my province this evening. I am concerned more particularly with the general nature of the collections illustrating Man and his culture.

I am especially desirous of pleading the cause of *variety* and *individuality* in Museums. One thing which must inevitably strike any one who has visited any considerable number of our Ethnological Museums and collections, is the fact of there being a marked general similarity, both in the nature of the collections themselves, and in their treatment for purposes of exhibition. Some are, of course, either richer in material or more carefully arranged; but, taken as a whole, one is accustomed to expect to find ethnological collections arranged, when classified at all, upon a purely geographical system, the specimens being, almost invariably, classified into groups based upon the regions whence the objects have come. Far be it from me to condemn a geographical system, so long as it can be carried out successfully, in such a way as to teach the museum-going public the main differences which exist between the various races of Man, whether it be in the physical or cultural aspects of Ethnology. It is absolutely necessary that some of our museums should be so arranged, but this system can only be followed with success in an institution of relatively large size, since much space and material is required in order to do justice to it. That the main ethnological collection in the British Museum should be arranged upon a geographical system, goes, I think, without saying, and there are other large museums, located in the more important centres, to which this principle of classification is eminently suitable.

With the very numerous smaller museums, the case is, I venture to think, different. The space is apt to be far too limited, and the specimens too few, to enable the Curator to arrange the collection in a manner whereby the principal ethnological features of the various regions are brought out in an instructive manner.

As a rule there will be an absence of *balance* between the regional groups. One or two regions may be well represented, others poorly or not at all, and a false impression is likely to be conveyed, even though the arrangement of the specimens may be well and thoughtfully executed. A purely geographical system on a small scale is, no doubt, a relatively *easy* one to follow, but this can hardly be advanced as a valid reason for its adoption. An easy method of arrangement is too frequently a mistaken one.

Admitting, as I cordially do, that, in certain Ethnological Museums—mainly those which are of large extent and well endowed—a geographical system of classification is most desirable, I wish now to point out how, in my opinion, the other museums may fill important places in the list of such institutions, and how they may incidentally better their own prospects, through the increasing support which would attend their enterprise in advancing the cause of Science.

It will be generally admitted that the most effective and legitimate method of attracting specimens to a museum lies in making it evident that specimens and collections accepted will be made to serve a really useful purpose, and be utilized in a scientific manner, either for educational purposes or for the advancement of Science through research. The science of Ethnology is so wide and comprehensive, and embraces the consideration of so many distinct factors and phenomena, that the classification of ethnological material in museums may well be subject to considerable variation, with the best results to the science. An immensely wide scope is afforded for specialization, if individual museums are devoted to the adequate treatment of selected branches of the science, instead of attempting to illustrate Ethnology in its wider aspects, an attempt which must in many cases be foredoomed to failure while, even if successfully carried out, it would only lead to a repetition of what was being done elsewhere.

I readily sympathize with the view that the authorities of local museums should devote their attention largely to collecting materials for illustrating the archæology and ethnology of their own districts, and this, I am glad to think, is to a great extent being done. At the same time it appears to me that a reasonable concentration is desirable, and that this work should be definitely delegated to certain selected centres, in order that the material may not be too scattered.

Apart from this question of local antiquities, and specimens illustrating Man's occupation of the several districts, there are many problems which might be successfully undertaken, either in conjunction with local phenomena, or as an alternative to the more usual, generalized methods of treating ethnology.

There is one type of museum in which the British Islands are singularly deficient, and, by some irony of fate, it is one which would fully illustrate the ethnology and culture of the people of Great Britain, that is so conspicuously lacking. We have every reason for being proud of that noble institution the British Museum in Bloomsbury, with its immense wealth of archæological and ethnological material. At the same time, we must admit that its name implies rather that it is a treasured *possession* of the British Nation, than that it illustrates

its characteristics, developmental history and culture. British archaeology is, it is true, well represented, but there has been little space devoted to a connected treatment of the arts, industries and general culture of the nation through the historical period. This clearly indicates that this phase of the subject must be illustrated elsewhere. We want a *National* museum, national, that is, in the sense that it deals with the people of the British Islands, their arts, industries, customs and beliefs, local differences in physical and cultural characteristics, the development of appliances, the survival of primitive forms in certain districts, and so forth. Some attention has, I know, been given to these matters, as, for example, in the Antiquaries Museum in Edinburgh, the small private museum at Farnham, Wiltshire, formed by the late General Pitt Rivers, and some other museums and private collections; but nothing of a comprehensive nature has been attempted and we have allowed many interesting, and at one time important customs and appliances, associated with our national life, to die out, without having taken adequate steps to preserve their record. We have no institution in this country which occupies the position of the larger "Folk-museums" of the continent. Paris, Moscow, Stockholm, Christiania and Copenhagen, not to mention other large cities, all have their Folk-museums, illustrating in a most interesting and instructive manner the life of their people, particularly of their peasantry. Nor is it only the great cities, for many of the smaller towns, such as Bergen, Helsingfors, Sarajevo and others, have well-equipped and very popular museums of a similar kind. Surely, we have reason to be as interested in our national characteristics as other countries are of theirs, and, surely, the ethnology of and culture development in Great Britain are as important to us as these subjects are to continental peoples. And yet we still lack an institution in which the non-political history of the British Nation is studied and illustrated in a comprehensive manner. It is not too late even now to start such a National Museum, on the model of the famous Nordiska Museum in Stockholm, the life-work of Dr. A. Hazelius, which combines both indoor and outdoor museums, and which not only illustrates in a splendid manner the life of Scandinavian peoples, but also furnishes a valuable object lesson, as a record of what can be achieved through the enterprise and devotion of one man, starting with but very meagre funds.

There must be a great amount of material, representing the obsolete appliances and customs of Great Britain in the hands of private collectors, which would find its way into such a museum, if it were once started upon a satisfactory and systematic basis; and, with reasonable energy, we might in a few years' time boast of a National Museum which would defy the world to taunt us with the accusation that, while we eagerly look after and make collections illustrative of everybody else's ethnology, we neglect our own. Ethnological museums on an extensive scale are every now and then founded by enlightened private individuals, but, with the establishment of each new one on the old familiar lines, there is the loss of an opportunity for filling a serious gap, and for providing the country with something which it definitely lacks.

The establishment of a National Museum of the kind referred to, would probably entail an entirely new institution, or, at least, the complete remodelling of an existing one; but most of our present museums, whether large or small, could assist very materially in the advancement of anthropological studies, even without increasing the demands upon space and funds. If, for instance, some of our local museums were to relinquish the idea of forming *general* ethnological collections, which are as a rule beyond their scope, and for these would substitute collections illustrating particular branches of the subject, special phases of ethnology, a great advance would, I think, have been made. The subject selected would necessarily be one proportioned to space available and the financial conditions of the institution. There is a wide range of subjects from which to choose, since all the phenomena which touch upon man's life in the past and the present are available, any one of which is capable of furnishing material for educational and popular exhibits, as well as for research into the highways and byways of the science. A museum devoted, say, to illustrating well such a subject as the "influence of environment upon Man's physique and culture," would be teaching a very useful lesson in human bionomics. "Man's place in Nature" and the "Antiquity of Man" are obvious subjects, which can be treated *in extenso* or very concisely, according to circumstances, but in either case in an educational manner.

I might mention, further, a few of the many other subjects which almost cry out for proper treatment and development. The evolution and geographical distribution of special arts, industries, and their appliances, or of customs, might be illustrated by means of comparative series; the early history of warfare or of the chase, by means of examples of the weapons and other appliances used for the purpose by savage and barbaric peoples. Or, again, the evolution of currency from its origin in mere barter, down to the development of a true coinage; early methods of navigation; the history of agriculture; the phylogeny of musical instruments; these are all subjects of interest to all, and capable of being well illustrated. Then, comparative series illustrating the development of weaving, metallurgy, and other such industries, would be eminently adapted for museums in the main centres of the present industries themselves, and the local familiarity with the technique of the crafts, would be invaluable to the student and researcher in their comparative history and phylogeny. The growth of realistic and decorative art from the earliest rudiments including the evolution of patterns and the factors determining variation, is a peculiarly fascinating study, which has received a good deal of attention, though, as yet, no museum has been devoted to this subject, excepting as an incidental feature.

In investigating these and all other manifestations of human enterprise, one is carried far behind the scenes in the workings of the human mind, and I cannot but think that anthropology would gain enormously, both in popular estimation and in scientific results, if a number of our museums would take up special branches of the science of a more or less comprehensive nature according to the available space

and funds, but, in all cases, with the definite intention of rendering their collections as complete as possible within the imposed limits. Far more benefits would accrue to anthropology from such individualization amongst museums, than could possibly be derived from what I must describe as the wearying monotony of geographical groups on a small scale, which is at present the prevailing system of classification, varied locally with no arrangement at all, or, perhaps, what is even worse, one based upon a system of grouping together specimens given by a particular benefactor, however miscellaneous they may be.

By taking up in a thorough and exhaustive manner special lines, each of these museums would acquire a really attractive individuality, gaining greatly in prestige thereby, and the collections would develop into connected series which would teach something definite, and attract both the public and the expert, and last but not least, the benefactor. The museum would become the focussing point, as it were, for the subject which it was developing; material suited to the special character of the institution would alone be retained, and take the place of the unconnected miscellanea which the museums are now apt to accept—leading so frequently to a mere jumble of exhibits. Every incoming specimen would have a definite importance and an appropriate place in the series. Students would soon get to know where the collections illustrating particular subjects were to be found, and the infinite labour and the expense involved in hunting for particular objects among the museums would be greatly lessened. Since every accepted specimen would have its proper place in the collection, whether exhibited or not, those museum abominations, the so-called “trophies” of miscellaneous weapons and other objects would come to a not untimely end. “Trophies” are easy to design and set up, but in nine cases out of ten, however artistic they may be from a purely decorative point of view, only disfigure the walls of museums, and, to the visitor desirous of learning, are merely an advertisement of the fact that there is something wanting in the scientific methods of the institution. They are apt to be the refuge of unenlightened curators, pandering to an assumed weakness on the part of the public.

I do not hesitate to admit that there are many difficulties which would have to be overcome, if the scheme suggested is to be carried out, and I do not wish to undervalue these. Many of them, however, would, I think, disappear automatically, once such a scheme was working, and when the results began to declare themselves. Some are purely sentimental difficulties, and should easily be overcome. At first it would, no doubt, in many instances be far from easy to obtain leave to exchange the existing miscellaneous specimens for fresh material of a homogeneous kind, suited to the special requirements of the museum. There is a prevailing feeling that *gifts* to museums must on no account be parted with, since it is thought that the generous donors would feel slighted thereby. Could anything be more fallacious than this superstition? The donor, presumably, wishes to benefit the institution, but some, or all, of his gifts may be of a kind of which that museum cannot make proper use, and, in such a case, neither is the institution benefited by the well-

intentioned generosity, nor is Science. But, under a well-organized scheme of museum specialization, there would be a suitable home for every specimen somewhere, and a judicious system of exchanges between museums would lead, not only to each establishment receiving *suitable* in lieu of *unsuitable* acquisitions, but the generous donor would have the satisfaction of seeing his gifts properly located where they would be of scientific interest, his own liberality to the museum which he specially wished to benefit, being represented by a gain to that institution of specimens of real value to it. He would thus be benefiting two or more museums instead of possibly hampering one.

A regularly organized system of exchanges would of itself lead to co-operation among museums; and, without free interchange and mutual support, the individualization of collections would be liable to fail in the full realization of its aims. Exchanges of specimens would bring exchange of ideas, and, as all the separate units in the general scheme would, in their several ways, be aiming at the advancement of Anthropology as a whole, active and whole-hearted co-operation would hasten the steps by which the goal is to be reached.

A friendly and stimulating rivalry would remain as an accompaniment to the desire to steadily improve the various collections and to maintain a high standard. Rare and unique specimens would not be valued on account of their being objects not possessed by other museums, but they would be estimated in accordance with their scientific bearing upon the special series of which they formed part, or, in the event of their being unsuited to these, they would be sent as valuable exchanges to museums in which they would find a proper context, mutual benefit thus resulting. It has occurred to me that something of the nature of a "court of arbitration" might be a useful adjunct to such a scheme as I have suggested, but this is a somewhat large subject with which I cannot here deal, and I have probably already overstepped the limits of your patience.

I may be accused, perhaps, of nursing a wild and unpractical scheme, or of lotus-eating, or, possibly, of building castles in the air. I hold, nevertheless, that the scheme only requires *nursing* to bring it to maturity; that a lotus may become digestible and even nutritious if properly prepared; and that those castles, however much in the air at present, can be erected upon solid foundations of practical utility. Anthropological museums and collections are not only a means of edifying and educating the public, but they are to a great extent the laboratories of anthropologists, and, while I recognize to the full the important part which they play, even now, in the progress of the science, I am deeply impressed with the belief that, under a suitable system of co-operative individualization, a harmony, as it were, of individual efforts—their potentialities, as factors in the advancement of Science, would be almost infinite. The work of these museums would thus be conducted in unison, with the same principal object in view, and with the certainty of attaining that object, namely, the increase of knowledge and the better understanding of Man and his works.

REPORT ON THE ETHNOLOGY OF THE SÍCIATL OF BRITISH COLUMBIA, A COAST DIVISION OF THE SALISH STOCK.

BY CHARLES HILL TOUT, Local Correspondent of the Anthropological Institute.

[WITH PLATE I.]

THE following notes are a summary of my studies among the Síciatl. I have been enabled to complete them earlier, and in a more exhaustive manner than I could otherwise have done, by a timely grant of £40 from the Royal Society. By means of this help I was able to spend the greater portion of a month among them in the summer of 1902, visiting their different settlements and gathering all information now available from the most reliable and authentic sources. With the exception perhaps of a few folk-tales, I believe these notes record all that may now be gathered of the past concerning this tribe.

Of all the native races of this province, they are probably the most modified by white influences. They are now, outwardly at least, a civilized people, and their lives and condition compare favourably with those of the better class of peasants of Western Europe. Their permanent tribal home, or headquarters, contains about a hundred well-built cottages, many of them two-storied, and some of them having as many as six rooms. Each house has its own garden-plot attached to it, in which are grown European fruits and vegetables. In the centre of the village, and dominating the whole, stands an imposing church, which cost the tribe nearly \$8,000 a few years ago. Near by, they have also a commodious and well-built meeting-room, or public hall, capable of holding 500 persons or more, and a handsome pavilion or band-stand fronts the bay. They possess also a convenient and effective waterworks system of their own. The water has been brought in iron pipes from a mountain stream some three miles off, and every street has its hydrants at intervals of 40 or 50 yards. From these, the water is easily carried into the houses in pails.

As a body, the Síciatl are, without doubt, the most industrious and prosperous of all the native peoples of this province. The men engage either in fishing or lumbering the whole year round. Some of them are also expert hunters, and during the season ship a great number of deer to the Vancouver market, their territory abounding in game of that kind.

Respecting their improved condition, their tribal and individual prosperity, highly moral character, and orderly conduct, it is only right to say that they owe it mainly, if not entirely, to the Fathers of the Oblate Mission, and particularly to the late Bishop Durieu, who more than forty years ago went first among them and

won them to the Roman Catholic faith. And most devout and reverent converts have they become, cheerfully and generously sustaining the Mission in their midst, and supplying all the wants of the Mission Fathers when amongst them.

ETHNOGRAPHY AND SOCIOLOGY.

The tribe, as at present constituted, numbers some three hundred and twenty-five souls, between sixty and seventy of whom are adult males. It is a very difficult matter to get the exact number of any Indian settlement. Census-taking is something entirely foreign to the native mind, and no inhabitant of a native village, even when it contains less than a score of souls, can tell one offhand the number of adult males living in it. When questioned upon the point, they have to count them off by name upon their fingers, and are then as likely to overlook some as to give an accurate total.

The Siciatl are obviously a mixed people. The facial types among them would make this quite clear, even if we had no evidence of the fact in their traditions and genealogies. At the time when the late Bishop Durieu first came among them in the early sixties of the last century, they were divided into four septs or sub-tribes, each having its own settlement and fishing and hunting grounds. These were in the neighbourhood of Sechelt peninsula, the neck of which commences about twenty or thirty miles above the entrance to Howe Sound, the waters of the neighbouring Sk'qómic. The present Mission, or headquarters of the united tribe, situated on Trail Bay on the outer side of the neck of the peninsula, is of modern origin, dating only from Bishop Durieu's time. Prior to that, though a most desirable and sheltered spot, fear of the blood-thirsty, marauding Yúkeltās (a Kwakiutl subdivision) prevented them from making a permanent settlement here. Known to them by the name of *Tcatēlētē* (= "outside water") it formed a temporary halting place and general rendezvous for the tribe. Here the different septs sometimes met for a common hunt. The neck at this point formed also a portage to the divisions living on the inner waters, and made a short cut for them to the Gulf, being only eleven hundred yards wide at this point.

The following are the names and settlements of the old divisions of the tribe:—

QÚNĒTCIN, at the head of Queen's Reach.

Tsónai, at Deserted Bay, the junction of Queen's Reach and Princess Royal Reach.

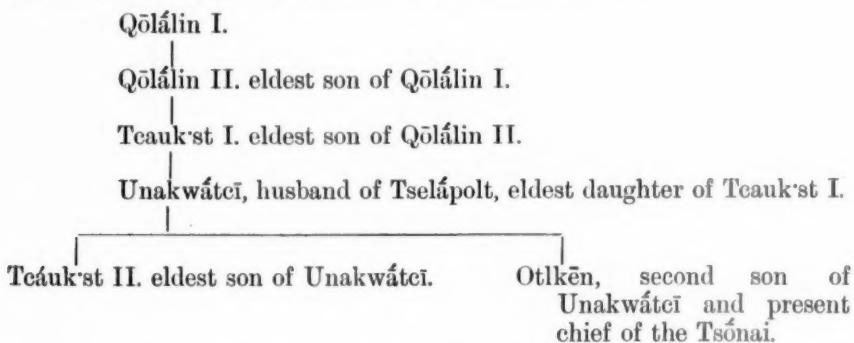
TŪWĀNEKQ, at head of Narrow's Arm.

SQAIAQŌS with many settlements, but no fixed abode.

Of the above four subdivisions, the two former are said to be of extraneous origin, being founded by men of Kwakiutl lineage. The two latter represent the true Siciatl. Regarding these septs separately, the Tsónai now number about forty souls. I gathered from the chief and his brother all that is now known of their ancestry and past. They have a genealogical table, extending back to the sixth generation, that is, to their TÓPIYUK. The genealogical lists of all the Siciatl

divisions stop at this point. They have no memories or traditions of anything beyond. The TÓPIYUK is always with them the "first-man."

The following is the genealogical table of the Tsónai chiefs:—



It would appear from the family traditions that Qōlālin I. was not originally a chief of the Tsónai. It is related that he acquired the chieftaincy by excelling all others in "potlatching"; and he is said to come from Fort Rupert.¹ His name bears witness to his greatness in this line, the term being derived from the root Qōtsōt, "to hold in a bundle," or "press down," *i.e.*, all other competitors. He was a man of great wealth. He possessed a kind of Fortunatus' purse in the form of a tētēlētc="increasing." This was described to me as a kind of baby that he found in the forest one day and took home and placed in a box, which immediately became filled with potlatch treasures of all kinds. Hence his ability to excel in potlatches, and hence his name. He possessed also a large house called Kwōsen-autq="star house," so named because the roof was constructed in such a manner that the stars could be seen through numerous small holes in it. No rain ever came in through these star-holes. Adorning the structure were many squtk^a, that is, carvings and paintings of animals. I was assured that these squtk^a were in no way totemistic in character, nothing corresponding to the totem crests or symbols of the northern tribes being known among the old Siciatl according to all my informants. They were simply symbolical of the *social status* of the owner. The figures were such as in the native mind typified greatness, loftiness, strength, power, wisdom, and so on; such as the eagle, the raven, the bear, the whale, and the beaver; and their number and variety on a man's house or belongings marked the measure of his ability to excel in potlatching. Only men of acknowledged position in the tribe ever ventured to decorate their houses with such carvings or paintings. The ridicule of their fellows effectually prevented any man from undeservedly acquiring these distinctions.

When Qōlālin was advanced in years, he became desirous of securing his eldest son's succession to the chieftaincy; and to ensure this he gave a great feast, publicly resigned the chieftaincy, and nominated his son as chief in his stead, giving him at the same time his name and all his wealth. As no one could now

¹ A Kwakiuk settlement.

dispute his claims to the office, Qōlālin II. was acknowledged chief of the tribe. He took to himself nine wives, by whom he had ōpedālī tūkwēls, "ten offspring." When he became aged, he followed his father's example, gave a great feast, and distributed many presents. At the close of the feast, he led forward his sons and daughters, and declared his eldest son chief in his stead. His name was Tcauk'st which signifies of clean or honourable descent; implying by this that his parentage was above reproach, that he had no slave blood, or dog-blood, or other animal blood in his veins. He was regarded by all as "planted" firmly or deeply in the headship of the tribe.

Tcauk'st had one wife only, by whom he had sēlatsālī tūkwēls, two sons and three daughters. His sons both dying, when he reached a ripe old age, he gave a great feast and named his eldest daughter Tselāpolt as his successor and chieftainess of the tribe. Later she married Unakwātcī, and he, taking his wife's rank and privileges, became a chief. By the help of his father-in-law, he gave many potlatches, and was acknowledged as supreme chief. It was during the chieftaincy of Unakwātcī that Bishop Durieu came first among the S'ciatl. He was welcomed by this chief, and in return, it is reported, the bishop gave Unakwātcī a bell, and made him and his successors hereditary chiefs of the Church which he established in their midst.

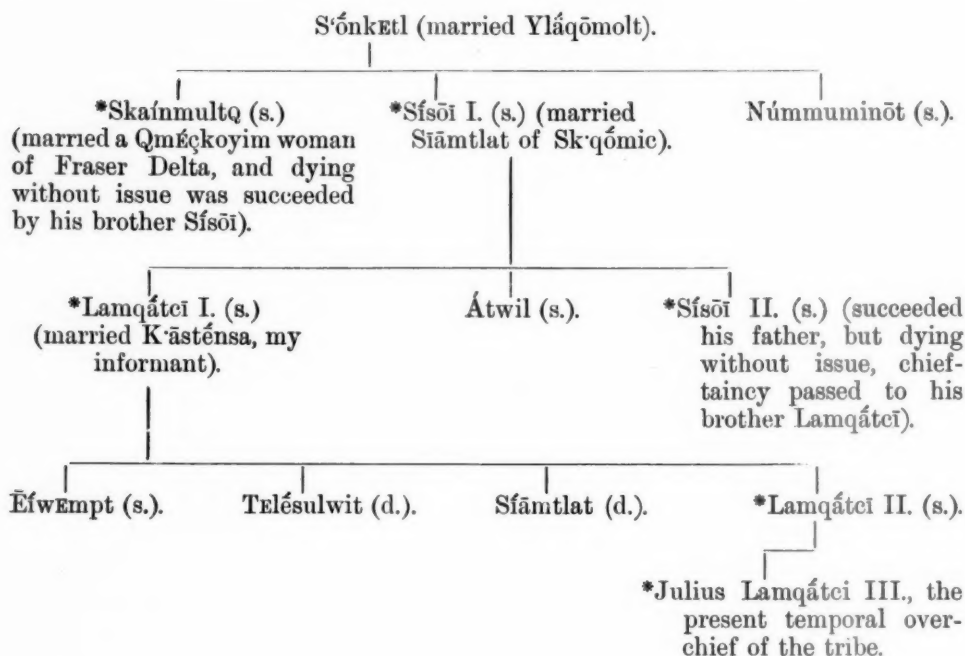
Unakwātcī had seven children, two boys and five girls. When he was advanced in years, the bishop made him "sit down," and named his son Tcauk'st as chief in his stead. But Tcauk'st's mind becoming unbalanced later, he was set aside, and Unakwātcī was reinstated in the office, which he held to the time of his death. As his successor, the bishop appointed his second son Ōtlkēn, the present occupant of the office.

I have thought it worth while to give the family history of the Tsónai chiefs as they gave it to me, because of the sidelight it throws upon important practices and customs.

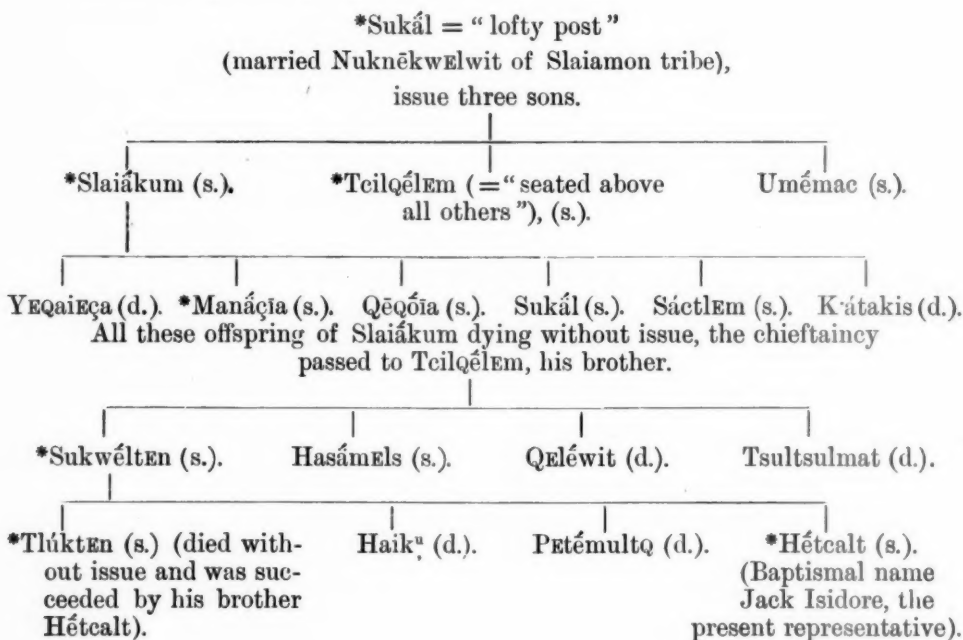
In addition to the above genealogical table of the Tsónai chiefs, I obtained the pedigrees of the chiefs of the Sqafaqōs and Tūwánokq. It is worthy of remark as showing how deeply their modern environment has modified their lines, that only one person, an aged woman, knew or remembered the genealogical tables of the chieftains of these septs. Concerning the family history of the chiefs of the Qunétcin division, I could obtain no account whatever, no one apparently possessing any knowledge thereof.

The following is the genealogical table and history of the Sqafaqōs.

According to the belief of the natives, the founder of the Sqafaqōs was te spēlamūtl, "a heaven-born man" named S'ónketl. He had a brother named Sukál, who became a secondary chief, and a wife named Yálqōmolt. He is said to have first appeared at a place called Smēt, which is at the head of Hotham Sound. This meagre account is all that can now be gathered concerning the past of this subdivision of the S'ciatl. The pedigrees of S'ónketl and his brother Sukál as given to me are as follows:—



The following is the pedigree of Sukál:—



N.B.—The names marked with an asterisk were ruling chiefs, (s.) and (d.) stand for "son" and "daughter."

Tūwānekq Sept.

The founder of the Tūwānekq division was also *te spēlemūtl*. His name was *Tlentckénem*. His successors were *Tlentckénem* II., III., IV., V. and VI., who is now a small boy.

We learn from these Family Tables that the chieftaincy was practically hereditary, although theoretically within the grasp of any member of the tribe who could outdo the ruling chief in potlatching or feast-giving; and it is not without interest to observe that the same anxiety and ambition to found and perpetuate a family, displayed in modern society, are equally factors in the life of savage races.

Socially, the Sfcíatl people were divided into three castes or classes, as in the other Salish tribes examined, viz., chiefs, nobles, and base folk. We have seen how the first are constituted; the second were composed of the heads of families of standing, and, generally, of the wealthy. The last were made up of the thriftless, the indolent, and the slaves of the tribe. I made special and repeated inquiries with regard to secret societies and brotherhoods, and induced my informants and helpers to question in my presence the old men and women on these points; but all were unanimous in declaring that nothing resembling the modern secret societies of the Kwakiutl, of which they have some knowledge, had any place among the old-time Sfcíatl. The nearest approach to anything of the kind was the initiation of the pupils, or disciples of the *Síyaikwētl* (medicine-man) or the *Síwín* (seer), who were accustomed to attach a few followers to themselves after the manner of apprentices. My own conclusions respecting the social life of the old Sfcíatl, formed after careful study and inquiry, are that it was of a very simple nature, and similar to that of the interior Salish tribes. The war-like division of the Kwakiutl stock which ruled the waters of the Strait, and kept the Sfcíatl isolated from other influences, effectually hindered the acquisition of foreign ideas or conceptions from those quarters; and the large influx of Lillooet blood in the present Sfcíatl suggests close relations with that tribe, if not original descent from it. Of the two dozen photographs which I obtained among the Sfcíatl, a preponderating number are those of individuals with Lillooet blood in them. Another thing which points to relationship, or at any rate close contact, with the interior Salish, is the fact that they formerly practised that peculiar custom of secluding certain of their children; a custom which my collection of Thompson folklore shows to have been at one time prevalent among the *N'tlakápmuq*, the neighbours of the Lillooet tribes. *A propos* of this practice, I learned from Charlie Roberts that the object of this seclusion was, in the case of male children, to make great hunters of them; great, that is, in the sense of securing by some occult means large quantities of game. They are said to have been quite white in appearance, much lighter than the average settler, from their long seclusion. They were shut up in box-like receptacles, and never allowed out of them, or the house, save at night, when they could not be seen. Another peculiarity was that their hair must never be cut. These individuals aroused much curiosity in the other members of the tribe, and all kinds of schemes were resorted to in order to

get a sight of them. In the case of youths, when it became known that one was about to set out on a hunting expedition, the young women would do their best to get a glimpse of him, and if possible, would waylay him, and induce him to break his celibacy in the hope of securing him for a husband. For, if a young man lay with a maid, she became *ipso facto* his wife. On leaving the house, they were always covered up with blankets, and were conducted by some near relative into the forest, until beyond the gaze of the curious and prying. They were supposed to possess supernatural powers of some sort. It is recorded of one that he went out fishing with his brother, and while they were engaged in their work, a young female seal popped up its head at a little distance from the canoe. When the youth saw it he cried out: "Oh what a nice young woman; how I should like her for a wife." The seal dived down, and his brother warned him to beware of uttering such wishes when so near a seal colony. But the youth took no notice of the advice, and made the remark again when the seal came up a second time near the canoe. Again it dived, but presently came up close to the canoe and assuming the form of a maiden, invited him to descend with her to the seal village below. He readily accepted the invitation, and dived down with her. After a little while he returned to the surface and bade his brother go home without him, saying that he intended to stay with the seal people. His brother urged him to change his mind, and accompany him, but was in the end obliged to return home without him; and his people never saw him again.

Shamanism.

The Shamans, among the old-time Siciatl, were of three classes: the *Siyalkw'tl* or doctor, the *Siwín* or seer, and the *Seiwa* or witch. The last-named were generally women, the other two invariably men. Their practices did not differ in any essential point from those of their class among the other Salish tribes treated of heretofore. The *Siyalkw'tl* corresponded to the *Squnám* of the *Halkómélem*, the *Siwín* to the *Olia*, and, like him, possessed clairvoyant powers, and could discover lost persons or things. One hears many stories of the supernormal powers of these *Siwín*, and they undoubtedly possessed the faculty of perceiving distant and hidden objects in some degree. Not every one who desired could become a *Siwín*. Only those whose psychical make-up fitted them for the office ever became *Siwín*.

Suliaism.

I inquired very particularly among the Siciatl concerning *Sulia*. In this tribe, as in the *Sk'qómic*, *suliaism* seems to have played a less prominent part than in the up-river and interior tribes. Not every one, it would appear, among these two tribes acquired *sulia* (called by them *s'úlyū*) or supernatural helpers. Those who possessed them were, according to all my informants, mostly shamans, or distinguished hunters, or fishers, or warriors, or runners, or those generally who exceeded in any particular thing; the attendant bodily exercises and the protracted fasts incidental to the acquisition of *sulia* apparently not being to the

liking of the ordinary individual. But as it was of the very essence of the *sulia* that its acquisition by the seeker should be kept secret from his fellows, at any rate among the *Sk'qómic* and *S'ciatl*, it is not improbable that this fact, and the long time that has elapsed since these tribes gave up their pagan habits and beliefs, hide from us the true extent to which *suliaism* permeated the lives of the old-time *Sk'qómic* and *S'ciatl*. Regarding the practice, however, merely from the point of view of my informants, we may yet perceive the significance which *suliaism* had in the mind of the natives, and the potent influence it exercised upon their lives. The importance of the psychical factor of this cult in the development of these races can hardly be over-estimated.

Among the *S'ciatl* there seems never to have been any painted or sculptured representations of the *sulia* on the houses or other belongings of the individual. Such sculptures and paintings as were displayed being, as I have already stated, honorific, and not totemistic in character. The import of this calls for consideration, for we have in these figures apparently another source or origin of personal and family crests. The son inheriting his father's house and rank, inherited with these all his carvings and paintings; and it becomes important in our studies of the social customs of the tribes of this region, and particularly of their crests and emblems, to determine which are honorific, which totemistic, and which merely commemorative in character; also to what extent the first were formerly employed, and what part they have played in the giving of animal names to individuals, families, and clans. For it seems impossible to doubt that figures of animals were used by other of the north-west tribes to symbolise the social status of their notabilities. Indeed, Father Morice has shown that the *Déné* tribes of the interior employed a like symbolism for that purpose,¹ and signs of it are not wanting in the heraldic columns of the northern coast Indians. It is quite likely that we have sometimes confused the honorific symbols with those of totemic import. Certainly, students of these races have customarily regarded house sculptures and paintings as being totemistic in character and significance; and while this view may be right in some cases, or even in the main, it is clear from my present studies of the *S'ciatl* and *Sk'qómic*, that it cannot be in all. It will be important then, in future researches, to distinguish clearly between the different classes of symbolism employed by our Indians.

Another point of some importance has been raised by my studies of the *S'ciatl*. According to them, the acquisition of such a magic treasure or supernatural helper as the *Tētēlētc* of the ancestor of the *Tsónai* chiefs, did not result in the founding of a new crest or totem as was invariably the case among their northern neighbours. No carvings, paintings, or other marks were employed to symbolise such objects or possessions, or to commemorate their acquisition. While this is possibly true, and is certainly in keeping with what we have learned of the *Salish* of the interior, too much stress

¹ "Notes on the Western *Dénés*," by the Rev. A. G. Morice, O.M.G. *Trans. Can. Institute*, No. 7, vol iv, part i, March, 1894.

should not be laid upon the statement. It is open to question whether the present S'ciatl are at all times trustworthy informants upon the practices and beliefs of their pagan ancestors, two generations separating them from the primitive order of things.

That the forest, the air, and the sea were full of mysteries to them is clear from their folk-tales; and their anthropomorphic conceptions of the animal and vegetable worlds coloured all their lives and thoughts, as among their neighbours. Even to-day, among the most advanced and intelligent of them, there is still a strong belief in the human or man-like side of animals, plants, and other objects and forces.

This universal concept of primitive man seems to be one of the most persistent of his early beliefs.

There is also one other point to which I would like to draw attention. The Tsōnai sept claim, as I have before stated, a Kwakiutl origin. If this be true, and I know no reason why we should doubt it, the entire absence among the S'ciatl of all those peculiar observances and customs, so characteristic of the Kwakiutl when they first came under our observation, would seem to indicate one of two things: either that the S'ciatl mind was uncongenial to Kwakiutl institutions, which is very unlikely, judging by their adoption more or less fully by other Salish tribes; or, which is more probable, that the present social organisation of the Kwakiutl, with its strange societies, clan divisions, and elaborate winter ceremonials, is of modern origin. This is the view which Dr. Boas' studies of this people led him to adopt, and the absence of anything resembling these practices among the S'ciatl, who claim relationship through one of their divisions with the Kwakiutl, certainly brings additional and independent support to that view.

Dress.

In dress the S'ciatl did not differ materially from the other Salish tribes already described. Dressed skins, blankets, woven from the hair of the mountain goat and from a species of long-haired dog bred for the purpose, and capes and skirts from the inner bark of the cedar (*Thuya gigantea*) formed the ordinary covering of the people. In mentioning the cedar as a source of clothing, it will not be out of place if I call attention here to the unique value of this tree to the old-time native, and the many uses to which he put it, and for which it was so eminently adaptable. It was to him much what the cocoanut-palm was to the South Sea Islander. From its outer bark he constructed ropes and lines, coverings for his dwelling, his slow matches, or "travelling fire," and many other things. From its inner bark his wife wove garments for herself and children, made their beds and pillows, padded her children's cradles, and fashioned the compressing bands and pads for deforming their heads, and also the insignia of their secret societies, their headdresses and other ceremonial decorations, besides applying it in a multitude of other ways. From its wood he built the family and communal dwellings, made such furniture as he used—tubs, pots, kettles,

bowls, dishes, and platters, fashioned his graceful and buoyant fishing and war canoes, his coffin, his treasure chests, his ceremonial masks, his heraldic emblems, his commemorative columns, his totem poles, and a host of other objects. From its branches he made his most enduring withes and ties, and from its split roots his wife constructed the beautiful basketry of this region. There was practically no part of this remarkable tree which he did not apply to some useful purpose or other. He even resorted to it for food in times of scarcity and famine: his wives and daughters robbing the squirrels and chipmunks of their stores of its cones for the nutriment they contained. One can hardly imagine what the condition of the natives of this region would have been without this tree, no other of the country lending itself to such a variety of useful purposes. That it has had a profound influence upon their condition, and has helped to shape the lines of their culture, there can be no doubt.

Dwellings.

The dwellings of the old-time Siciatl were of the communal kind. They appear, however, not to have been so long generally as among some of the coast Salish; the nature of the ground at these villages not being so convenient for this purpose. In height they ranged from twenty-five feet to forty or even fifty feet, according to Charlie Roberts, but I think these latter heights doubtful. Usually each house was occupied only by persons connected by family ties. Families with numerous ramifications would always possess a building of their own, but sometimes two or more small families would share the same building between them. Isolated individuals, or those having few connections, would find accommodation in some family, whose dwelling was larger than their needs required.

The internal structure and arrangement differed somewhat from that of the other tribes. For example, at the building of the house a permanent platform about two feet high and five or six feet broad was erected all round the interior walls. This served as seats or lounges for the occupants during the day, and during the night as beds. Some ten or twelve feet above this platform small isolated cubicles or sleeping rooms were constructed. These were for pubescent boys and girls, who were confined separately in them for the space of ten days upon their reaching puberty.

Each family partitioned off its allotment from the rest by means of hanging mats. There were no hanging shelves for storing food, as in the Sk'qómic and Halkómélem houses, for the reason that their supplies were kept elsewhere.

Food.

The staple food of the Siciatl consisted of about equal proportions of venison and fish, supplemented by various roots and berries. Their territory abounded in game, and their waters teemed with fish. As I have said, they did not store their winter supplies in their dwellings, but "cached" them in the woods. Only a few days' supply was ever carried home. This peculiar custom was due to

the marauding proclivities of the neighbouring Yúkeltās, who made periodical forays upon their settlement and carried off all they could lay hands upon. It was unsafe, therefore, to keep a large store of food by them.

In the matter of preserving the berries of their district for winter use, they had, and still practise, a most ingenious method of treating them. On one of my visits among them I was present when some of the women were making their winter "jam" from the salal berry, and I was thus able to observe the whole process. The fruit is first boiled for an hour or so, after which it is poured into a bowl and carefully mashed into a uniform jelly with a wooden pestle. A layer of large leaves is now spread over a kind of tray, made of narrow strips of wood fastened together by cross pieces. Upon the leaves is spread out a thin continuous layer of the jelly. The tray is then placed in the sun to dry, and when the upper side of the jelly has hardened into a cake, the whole is turned over on to another tray, and the other side of the layer is also left to dry out. When both sides are properly dried, the jam has the appearance of a piece of coarse felt, and can be rolled up like a mat and stored away for use. Now-a-days they use sugar in the boiling; formerly, of course, they had to dispense with this. When they wish to make use of this preserved fruit, they break off a piece, steep it in water for awhile and then reboil it, just as we do the evaporated fruits of commerce. Cured and preserved in this way, they say fruit will keep in good condition from season to season, or even longer, if kept dry and free from mildew.

Household Utensils.

The Siciatl made use of utensils similar to those employed by their congeners. Some of the women were very skilful in making the cedar-root basketry of this region. Even now, they make large numbers of them for sale to tourists, receiving from five to fifteen dollars a basket, according to size and quality. They had received an order just before my last visit to them, and many of the women and girls were busy in carrying it out. They employ only the small trailing roots of the bigger cedar for this kind of basketry. I was fortunate enough to be able to observe closely the whole process from beginning to end, and, indeed, I may say that I received instruction enough to be able, in a clumsy way, to put a basket together myself. The actual process of making is simpler than the appearance of the finished product would lead one to suppose. The most difficult and tedious part of the work is the preparation of the material. This, as I have said, is the root, or rather rootlets, of the cedar. These are dug up by the women with their *skulq*, or root-diggers, and brought home in bundles. The longer the roots the better, but the thickness of them should not exceed a thumb's width. The roots are first peeled or scraped, and, if not wanted at once, are placed in a stream or buried in wet ground to keep them moist and pliable. If required at once, they are halved and quartered longitudinally. This is done by means of a knife, and the hands and teeth, the latter playing a prominent part in the operation. The quarters are then split in the same manner into thin strands or splints of uniform

thickness. Those that are not of uniform thickness are pared down to the required condition with a knife; but if too irregular for this purpose, they are set aside with the short lengths and broken pieces, to be used in the construction of the cores or coils of the basket. The strands are next tied separately into loose knots, just as one ties a bootlace or a piece of string, and thrown into a pail or pan of water ready for use. When a sufficient quantity of strands has been prepared, the woman sets about making her basket. She begins by putting together a core of the required length of the basket. This is made up of pieces of the cedar rootlets rejected in the process of making the strands, and varies from a quarter to half an inch in thickness. Round this core she next winds in close contact one of the strands, beginning at one end and finishing at the other. To both sides of this she then stitches, by over-casting other cores, until the bottom is of the desired dimensions. Upon this groundwork the sides are built up, coil by coil, in the same way. The stitching is done by means of an awl, now usually of steel, but formerly of pointed bone. Each stitch of the lower coil is pierced in turn, the strand carried over the new coil, which is built up as the work proceeds, passed back through the hole and pulled tight. This is repeated all round the basket, until the coil is complete. The coils are thus built up separately, one upon another, and when the desired height has been reached, finished off with a crown of doubled or trebled coils. The basket is made sometimes with a close-fitting lid or cover and sometimes without, according to the pattern or the use to which it is intended to be put. Usually these baskets are more or less ornamented with variously tinted grasses and barks. The bark most commonly employed for this purpose is that of the wild cherry and of the birch. Either strips of this, or the straws, or both combined, are hooked in on the outer surface of the basket during the process of making in the following manner:—One end is inserted under a stitch at some particular spot, and thus firmly secured. The strip of straw is then drawn over the face of the next stitch, and carried a little beyond it, then doubled back, and the doubled end fastened under the succeeding stitch, and the process is continued in the same manner as far as the design requires it. Sometimes this ornamentation is exceedingly tasteful, and the colours soft and harmonious. In some instances, the strips of bark are entirely dispensed with, and only a glossy yellow straw is employed. In such cases the whole outer surface of the basket is usually thus covered, giving to it a shining silvery appearance, and hiding entirely the underlying cedar strands. In the old days, besides these cedar-root baskets, they also made baskets from the bark of the birch, from water grasses, and from netted cords, spun from the bark of the cedar tree. These last they still make and employ, but I saw no specimen of the birchbark kind among them.

The S'ciatl had two kinds of bottles for storing their fish-oils, called respectively kwop't te lauī and peáltcis. The former was constructed from the air-bladder or sounds of fish, the latter from the bulbous kelp or seaweed (*Macrocystis pyrifera*) peculiar to the Pacific Coast. For domestic purposes they used a very singular detergent. It was a kind of tree-fungus, called by

them Qatkaimōnate, "thunder-excrement." As many of the women use it still, I was able to secure a specimen. In appearance it looks like a lump of dirty-white under-baked dough; but its strong saponaceous qualities make it an excellent substitute for soap.¹

Puberty Customs.

In puberty rites and observances no two of our Salish tribes seem to follow the same customs. Among the Siciatl the pubescent boy or girl was secluded from the rest of the household for the space of ten days in a cubicle (kówitl), built over the family bed in the interior of the dwelling. The period of a girl's seclusion was always coincident with her first menses; that of the boy was determined by the breaking of his voice, by the appearance of hair on the pubes, and by the disappearance of the hard, pellet-like substance at the base of the nipple of the mammary gland. If, at any time, the boy or girl desired to leave the cubicle for any purpose, the former was always accompanied by three old men, and the latter by the same number of old women. The occasion of their seclusion was taken advantage of by the elders to instruct them in the several duties and responsibilities of man and womanhood. They were made to eat and drink very sparingly throughout the whole period of their seclusion; the object of this on the part of the boy being to fit him for the privations of the hunter's life, and to prevent him from developing a lustful temperament and interfering with other men's wives. On the part of the girl, it was to prevent her from becoming a greedy and gluttonous woman, who would seek to rob her husband of the choicest portions of their food. To teach them industrious habits the girl was employed in plucking the needles from a fir branch one at a time, or in picking yarn and in spinning; the boy in making arrows and other masculine objects. In order to make sure that the girl drank but little she was supplied with only a shell of water at a meal, and frequently this had a hole pierced through it for the purpose of letting the water leak away. Nor must she put even this small receptacle to her mouth, but must suck the water up through a small tube or hollow bone. A girl's first period is called qáíeqa, the succeeding ones sqáíeqa. It was customary for the father or uncle of the boy or girl to give a sölómátes, or puberty feast, at this time to mark the occasion. If no feast were given, their friends and

¹ Since the above was written, a paper "On the Anatomical Characters of the substance 'Indian Soap'," written by Miss M. Dawson, B.Sc. (Lond. and Wales), and published in the *Transactions of the Canadian Institute*, has come into my hands. According to Professor Macoun the substance is a Polyporus allied to *P. betulinus*, which had become changed by its own mycelium into punk. Miss Dawson in summing up her paper remarks, "As regards the nature of this substance, 'Indian soap,' the general arrangement and character of the large colourless hyphæ seem to support Professor Macoun's conclusion that it consists of a fructification of a Polyporus. . . . The whole structure has obviously been much changed by the action of parasitic hyphæ, so that we may perhaps, with justice, conclude that it consists of some large fungus, probably of the Polyporus type, which has been destroyed by two parasitic fungi. . . . As a result, degeneration of some of the interwoven hyphæ seems to have taken place, giving rise to a resinous substance to whose presence the characteristic saponaceous feeling is due."

relatives would be much ashamed, and feel lowered in the eyes of the rest of the tribe. After the period of seclusion of the girl was over, she was thenceforward treated as a woman. Her parents presented her with a comb and a pair of fire-tongs, and stones for heating water, and other household utensils, oiled her hair and painted her eyebrows and cheeks after the manner of women.

Mortuary Customs.

These customs among the S'ciatl differed somewhat from those practised by the Halkōmēlēm tribes.

Dread of the dead was apparently not so strong among them as among the River tribes. The corpse was not taken out of the house, for instance, until the time of burial, usually the day following the death. It was prepared for burial by four or five old men, friends of the relatives. This unusual delay in the disposal of the corpse was due to the fact that these old men had to go apart by themselves, and undergo some ceremonial preparation, before they handled the body. The treatment of the corpse among the S'ciatl was similar to that among the tribes already treated of. When ready for disposal, it was usually placed on the open ground on some island set apart for this purpose. Since their conversion to Christianity the S'ciatl have gathered up all these old corpses and their remains and buried them in their consecrated grave-yards; somatological material is therefore difficult to secure among this tribe.

Beliefs and Customs.

The S'ciatl believe that the raven foretells the death of anyone. When they see him sitting on the branch of a tree, ruffling his feathers and croaking dismally, they believe that someone among them will shortly die. The old people also say that he gives notice of the approach of a canoe long before they know of it.

When a girl is undergoing her puberty rites she must not eat salmon, or there will be a scarcity of this fish at the next run.

Survivors of dead relatives must never eat salmon in the early stages of the run, nor enter a creek where salmon are found, or the salmon will be harmed. A dead body, or anything in connection with the dead, is inimical to the salmon.

When the women clean the first salmon of the season they must avoid wrenching off the neck. They are permitted to do this only with the later salmon.

Times and Seasons.

The S'ciatl divided their year into twelve portions, which correspond approximately to our twelve months. The moon seems to have held a very subordinate part in these divisions.

The year (S'ilāmin) as a whole was reckoned either by summers or by winters, that is by so many tem éyōs, "fine seasons," or by so many skwōmai, "snows."

The seasons (tem) are Spring, tem paíya, Summer, tem éyōs, Autumn (*vacat*), Winter, tem teim, "cold season" or tem sôtetc.

Past seasons, or years, were thus expressed:—"last year," *spénewōtl*; last summer, *tem éyōs-ōtl*; last winter, *tem tcim-ōtl*, etc.

The divisions of the year are:—

<i>January</i> ,	<i>tem k'aikq</i> ,	"eagle" time, so called because the eagle, they say, hatches its eggs about this time.
<i>February</i> ,	<i>tem nem</i> ,	"time when the big fish lay their eggs."
<i>March</i> ,	<i>tem sátskai</i> ,	"budding time."
<i>April</i> ,	<i>tem slēm</i> ,	(from <i>lēm</i> , name of a large migratory bird with a red breast, and long neck and legs (not identified), which stays about a month in these parts.)
<i>May</i> ,	<i>tem tséōhtséōh</i> ,	"The Diver (Loon)," so called because this bird begins to make its nest and lay about this time.
<i>June</i> ,	<i>tem k'wēk'wel</i> ,	"salmon-berry" time.
<i>July</i> ,	<i>tem saíuq</i> ,	"red-cap" time (the "red-cap" is a species of wild raspberry of this region).
<i>August</i> ,	<i>tem tákā</i> ,	"salal-berry" time.
<i>September</i> ,	<i>tem ok'wálenuh</i> ,	"time when the fish stop running."
<i>October</i> ,	<i>tem palk'ál'nuh</i> ,	"time when the leaves fade."
<i>November</i> ,	<i>tem qásētcin</i> ,	"time when the fish leave the streams."
<i>December</i> ,	<i>tem kwitō</i> ,	"time when the raven lays his eggs."

The Siciatl seem to have no special terms for the quarters as such, but specialize the winds coming from them, thus: *North wind*, *tolúmela*; *south wind*, *k'aiwáluk*; *west wind*, *tlalicáluk*; *east wind*, *kēcáluk*.

ARCHAEOLOGY.

The archæological remains within the Siciatl boundaries differ in some interesting features from those already described in other centres. Speaking broadly, they may be divided into three classes, viz., midden-heaps, cairns, and fishing works. With respect to the first, they are to be found throughout the whole territory, wherever a suitable camping ground is found. Some of them are comparatively modern, and of no great extent, and are clearly old camps of the present tribes. Others belong no less clearly to a more remote period, and were formed, here as elsewhere, by races antecedent to the Salish. Some of the largest and oldest trees of the district are found growing over them, their roots gripping the midden-mass, and extending throughout it, thus plainly showing that they have sprung up there since the camp was abandoned, which, in some cases, must have been at least half a millennium ago. These midden-heaps do not differ in any essential features from those already described by me, except that I found none so large and extensive as those on the banks of the Lower Fraser and the shores of Puget Sound; and as far as my necessarily restricted examination went, they appear to be rather poor in relics. I secured a few arrow and spear-heads, some broken slate knives of the crescentic pattern, characteristic of this region, an imperfect pestle-hammer, and a few other specimens. The means at my disposal did not permit of extensive investigations.

Concerning the second class of remains, the cairns, I am unable to speak positively of the number and extent of these. The natives appear to know nothing of them, or where they are to be found. Those that came under my observation are situated on the summit of a mountain overlooking Pender Harbour and the waters of the Strait. This mountain is about twelve hundred feet above sea level. Its summit is open and terrace-like and almost devoid of soil. From the top an extensive outlook may be had of the waters of the Strait. It is very probable that other mountain-tops or slopes in the S'ciatl territories contain similar remains.

These structures differ from those found in the Halkomélem territory, chiefly in the fact that they are composed wholly of stone, and in this respect are similar to some of those found on the southern half of Vancouver Island. The preliminary steps in the formation of these sepulchres were the same as those employed in the formation of the burial mounds or tumuli. An enclosure of varying dimensions was first formed by means of a wall of stones or boulders, set sometimes close together, at others at some distance apart. This boundary in the Halkomélem area was invariably rectangular in form. On this mountain, on the contrary, it varies from a proximately true circle to an oval. Within the enclosure thus formed the corpse was set down in the middle and covered over with a huge pile of rocks and thus left. It is not easy to estimate the age of these mountain tombs. All one can say is that they are not modern. Such as were examined contained no visible remains of any kind. That they belong to a comparatively distant past is clear from the fact that the modern Indians declare that they know nothing of them, and that their method of disposing of their dead before the advent of the missionary was to place them on certain of the islets in the inlets and arms of the Strait. This we know they did; for the remains of bodies so disposed of have been found on the islands.

Personally I am disposed to regard these mountain tombs or cairns, as I do the tumuli of the Halkomélem area, as the remains of a prae-Salishan people.

With respect to the third class of remains, the fishing works or stations, S'ciatl traditions make the Salish culture-hero or demi-god, Qeqels, the author of them. I am unable to say how many of these fishing-stations may be found in the S'ciatl territory; I have knowledge only of that at the mouth of a small stream near Pender Harbour. This stream drains a chain of small lakes which were a favourite spawning-ground of the salmon, and its mouth lends itself admirably to the formation of the kind of traps we find here. It is not the ordinary barrier or weir stretching across the mouth of the river which impedes the ascent of the salmon and causes them to congregate in great numbers at the foot, but a series of lateral pockets or traps made of stone walls at one side of the stream, into which, by a series of channels or flumes, the fish are forced by the tide in their endeavours to ascend the stream to their spawning-grounds. At the ebb of the tide these pockets are practically drained, and the capture of the fish is an easy matter.

These traps are interesting in themselves as well as from the fact that they

illustrate admirably the skill of the native races in adapting means to ends. The builder of this fishing station was demonstrably a man of resources and ability, but whether of the Salish stock or of some other, it is now impossible to determine.

TRADITIONS.

TE SKÉMETL.

The Beaver.

TE QāmémanES éE tle siyákçaus éE ita émaç-ēt méman stómic.
An old-man and his wife-his and also grandson-their young man.
Qāk't' siyákçaus, kum skats kwes-yakçauEms. Nē ā TE pāla skēlt kum
No wife-his, then desired-he that-he might-take-a-wife. Upon a certain day then
tē sō émac tetsēt ā TE stōlō. tē tlālet sósō, kum tē sóqtas TE kwítlēm.
he went walking near to the river. he continued going, then he saw a smoke.
té-tlōms sōs kwélas, tē sóqtas ótlkai tlestlānai ástūq ā TE tlumstan, éi
he went to-investigate, he saw snake girl inside the house, fine
slānai, stōqwét aiyūbic tlā-tlōm slānai ótlkai. Té-tlōms kwāls TE stómic:
woman, exceedingly beautiful that woman snake. He spoke the man:
“etcālim tce kwālewōn wa-yākçūamēç-an?” Té-tlōms kwāls tlestlānai:
“what you think if-marry-you-I?” She answers youngwoman:
“Qā-tean Qā-teauq nE-sqātl-auq, çéçisōi TE kélōm, pēk tūk-wilas,
“not-I not-you I-like-you, squint the eye, broad belly,
k'aiak'auqauq TE icin maistōmī-tein.” Té-tlōms sōs tluk TE méman
short-arms and feet dislike-you-I.” He went out the young
stómic, tē sō améwit ā TE úlawēms, tē áqEç ā TE láas, tē quáEm.
man, he went home to the house-his, he lay on the bed-his, he cried.
Té-tlōms s'wālātēt E-tle sélas: “etcālim-teūq, émaç?
She asking of-his grandmother-his: “what's-the-matter-with-you, grandson?
Áshutē qaqawōm?” “Kakayawetlsaim, tcāia—I, titiltel-tōlawōs tein-kwa,
Why crying?” “She-called-me, grandmother, small-eyed I
tcāia—I, pēk-lāawī tein-kwa, tcāia—I, tcētcisteis nā teūya
grandmother, broad-bellied I, grandmother, arms very short
tein-kwa—I-I—I.”
I.”

[Each of these sentences is repeated three times in the story. The youth is supposed to be crying as he utters them.]

Té-tlōms quáEm tle sélas. “Nēá-an ótlkai háya
She weeps his grandmother-his. “Had-I-been-there-when snake thus-said
kwes-kakaiyEWut tētōs kwan émaç. etcālim-teálep ustélap-qaqaúEm?”
I-would-have-killed her my grandson. wherefore-you you-continue-crying?”
Té-tlōms quáEm tlat TE stómic. Té-tlōms óts cī-sámuktl, kum té-tlōms
He cries still the man. She calls-up invisible-rain-clouds, then it

¹ This particle *cī* plays an important part in the Siciatl dialect. It is used in a variety of constructions. Its chief function is to mark that which is absent and invisible. It is employed here to indicate that the storm came on suddenly without warning.

kutL tE sámuktl, aiyím etcitl tÉlatc. TE stólō tēsÉluq tE
 came the rain-cloud, very-heavy rain-storm arose. The river it-washed-away the
 tlúmstans tLE ótlkai slánai. tēsÉluq ótlkai, tē tlalsam-nōmōt etla
 house-her the snake woman. it-washed-away (the) snake, she saved-herself by-a
 sēsítálin sēsīa. Tē tcat kwāl tLE slánai:—"Aistómē-tein kelaú!" Tē
 grounded small-tree. She now called-out the woman:—"Love-you I beaver!" He
 kwāl tE kelaú: "Qā-teauq nesqatlaq." Tétlōms k'óis tLE ótlkai. Kums hóis.
 replies the beaver: "Not-you I-like-you." She died the snake. No more.

The Beaver.

Once upon a time an old man and his wife lived together with their grandson, a young man. He was unmarried and very much desired a wife. Upon a certain day he went out for a walk near the river. He walked on for some time and presently he saw some smoke ascending and went forward to investigate. On getting nearer he perceived a house, inside of which was a young snake woman. She was a very fine woman, exceedingly beautiful was that snake woman. He accosted her thus: "What do you think of the idea of becoming my wife?" The young woman answered, "I couldn't think of marrying you. I don't like squint-eyed, broad-bellied men, with short arms and feet. Go away, I dislike you." Thus dismissed, the young man went out and started homewards for his own house. When he got there he threw himself on his bed and cried bitterly. His grandmother, seeing him, asked what was the matter, and why he was crying. "Oh, grandmother," he sobbed out, "she called me cross-eyed and big-bellied, and taunted me with my short arms and legs." The grandmother wept in sympathy, and said, "If I had been there, my grandson, when she called you these ill names I would have killed her. But don't cry any more, I will punish her." Thereupon she calls upon the invisible rain-clouds. Soon they appeared and a heavy rain-storm arose. The river rose rapidly, and in a short time washed away the house of the snake woman and also the snake herself, who was only saved from immediate drowning by clinging to the roots of a small tree. In her peril she cries out to the beaver, "Oh, Beaver, I love you." Beaver replies, "But I don't love you," and left her to her fate. The water continuing to rise, she was presently drowned.

TE Wókwenátcem ita tE Stémtem.

The Wolf and the Wren.

Tē sō émac tE stémtem stetsét ā tE kótlkō, tē tlálet sōsō, kum tē
 He went walking the wren near to the sea, he continued going, then he
 sóqtas tLE kwénis skóiyēt. Tē sō tla tas, tēélesōt ā tE kwatámelōms.
 perceived a whale lying-dead. He went up to it, he clambered on to the side-its.

Tē sélētas tLE tlátctens, tétélem kwes tē sō émac: "nesqátl kwens sōqt
 He searched-for his knife-his, singing as he went walking: "I wish that-I could find
 tlen tlátcten ts'! ts'! kwens kwoqt tLE kwénis ts'! ts'!"
 my knife so-that-I-could cut-up the whale."

[This is repeated three times in the story.]

Kum keq te skálmīūq, stlumis, nē ā te tā-témīūq kāmām-et tāsēt te
 Then many the people, crowds, on the other-side (of water) hear-they those the
 stémtem tétélem nē ē ā te tā-témīūq té-tlōms kwínats-ēt te snúkqitl-ēt, té-tlōms
 wren singing there on the other-side they take-they the canoes-their, they
 sōwēt kwe-témīūq, té sóqtas-ēt tle kwénis. Té-tlōms kwoqsēt aukq, qāk't'
 go-they across, they perceive-they the whale. They cut-up all, none
 s'na tle stémtem. Tē sō te stémtem yélcēn. Kwes té sóqtas tle tlátetens. Tē
 his the wren. He goes the wren back. When he found the knife-his. He
 sō tas ā te sqenēs, sōs tle kwénis, túiyet tle sóci cau. Tē kwín-nuq-
 went there to the game, gone the whale, only a tiny bone (was left). He took-it.
 ūas. Té-tlōms sōs teimīekwōp, té hēwētas te cau. Té k'wel te cau, te-tlōms
 He went built-a-fire, he put-in-fire the bone. He cooked the bone, he
 skómōts. Tē toētas étla tlátetens stesēt ā te múksens. Tē teet-núq-ūas te
 "mouthed"-it. He cut-it with-his knife-his close to the nose-his. He cut-it the
 múksens té kwutl pélem. Steqwét qétlitl te stémtem, té nemácac te
 nose-his it came hanging-down. Greatly distressed the wren, he threw-away the
 cau. Té-tlōms kwaiéc, té sō émāc ā te qéteim, saliakaim te múksens. Sōs
 bone. He stood-up, he went walking to the woods, dangling the nose-his. Going-on
 té sóqtas te teiteim, té-tlōms sōs tle tas. Té sóqtas te stómic s'aqaiç stesēt ā te
 he perceives a fire, he goes to it. He saw a man lying near to the
 teiteim. Té sóqtem te stémtem té-tlōms kwāls te stómic: "émāc ne-siaíya."
 fire. He seeing the wren, he says the man: "Walk-forward my-friend."
 Tá-tlōm stómic steqwét qus te yéniss. Té-tlōms kwāls tá-tlōm stómic: "O
 That man very sore the tooth-his. He speaks that man: "O
 te-núwil ne-siaíya, steqwét qus te-ne yénis." Té-tlōms kwetét tle stémtem.
 you my-friend very sore my tooth." He examined-it the wren.
 Té-tlōms kwāls te stémtem: "O ne-siaíya qā winākwes te skwói." Té-tlōms
 He said the wren: "O my-friend not severe the sickness." He
 kwāls te stémtem "tlatléū-sqatlét te-neséna múksen." Té-tlōms kwāls
 continues the wren "very-different-matter-to-cure my nose." He replied
 te stómic: "O ne-siaíya qā sqatlátas, laçmá-tein skwa te múksen." Té-tlōms
 the man: "O my-friend not hard-to-cure-it, heal I will your nose." He
 sōs te stémtem, té kwínātem tle tlátetens, té sō tla-tas te stómic, té wátatas
 went the wren, he took the knife-his, he went over-to the man, he wrenched-out
 étle tlátetens te yénis tla stómic. Tē qaiem te stómic, té-tlōms kwaiéc
 with-his knife-his the tooth of-the man. He laughs the man, he stood-up
 te-tenítl, té sō tla-tas te stémtem, té kwínātas te múksen tla stémtem, té
 he, he went over-to the wren, he took the nose of-the wren, he
 tluk-wamátas. Té-tlōms sōwét émēwac. hóis.
 made-it-whole. They go-they walking-off. *Finis.*

The Wolf and the Wren.

Once upon a time, Wren was walking near the beach when he perceived a
 whale lying dead. He approached it, and clambered up on one side, and searched

for his knife to cut it up. Not finding it, he sings to himself, "I wish that I could find my knife; I wish, I wish, I wish that I could find my knife, so that I might cut up this whale." Now it happened that there were a great many people on the other side of the water, and they heard Wren singing his song. Thereupon they take their canoes and cross over to his side. In the meantime Wren goes home to look for his knife. When the people arrived on the beach, they saw the whale and set to work at once to cut it up. They took away every bit of it, leaving none for Wren. When he got back with his knife, he found the whale gone and nothing left but a tiny morsel of bone. This he picked up, and when he had made a fire, he roasted it. When it was cooked, he put it into his mouth with one end of it sticking out. Taking his knife, he sought to cut it off close to his nose, and in doing so, cut the point of his nose off so that it hung down. Greatly distressed at his mishap, he threw away the bone and started off into the woods with his nose dangling before him. When he had gone a little way, he perceived a fire, and, on approaching it, saw a man lying near. When the man saw Wren, he cried out, "Come forward, my friend, come forward." Now the man was suffering very much from toothache, and said to Wren, "Oh, my friend, my tooth is very sore." Wren examined the man's tooth and said, "Oh, my friend, you are not very ill. Your tooth is nothing to my nose." But the man replies, "Your case is not very hard, my friend, I will soon heal your nose." Wren then took his knife, went over to the man and quickly wrenched out the aching tooth with his knife. The man was greatly relieved, got up, and went over to Wren, and taking his nose in his hand, set it in its place, and immediately it became whole. They then separated, each going off in the opposite direction.

TE Siatyāk Sqáqiam.

The Sun Myth.

Netcáli qāmámanes nī te ménas, temicnáli te síyalekçaus.¹ TE swáwewlōs
One old-man had a son-his, two the wines-his. The youth
palát toátcatetlem.² KEq-áli³ TE skúmakums, kum tlōms⁴ sōs kla TE síya, kum
always hunting. Many the companions-his, then he goes to a tree, then
tlōms lémetas, tlōms qátuks TE síya té-tlōms hōnōçōts TE skúmakums, tē kwásas
he kicks-it, it burns the tree they gather-round the companions-his, it warms
tatnénis. Kum tē sō émēwec, tē sóqtasēt TE skwétlai ée TE hópít. Tē
all-of-them. Then they go walking, they perceive-they a mountain-goat and a deer. He
tōçōtem Tleyekóskin TE skwétlai ée TE hópít, tē qainúqūas auk'q.
shot (did) Tleyekóskin (youth's name) the mountain-goat and the deer, he killed-them all.
Té-tlōms sōs TE skúmakums, yactasēt TE skwétlai ée TE hópít, tē sō
They go the companions-his, they pack the mountain-goat and the deer, they come (to the)
caúwau. Tē kwáetEM Tleyekóekin tle síyácin nē ā TE tat-kwát tle stólō. Tē
beach. He left (did) Tleyekóekin his pack-his on the far bank of-the river. He
sō améwit ā TE tlúmstans, tē tálwitas TE mens: "Mā, kwó-tein⁵-kwátán
went home to the house-his, he informed the father-his: "Father (said he), I left
tle síyácin ā TE tat-kwát tle stólō." Té-tlōms sōs kwaiéc TE qāmémanes, tē
a pack on the far bank of-the river." He went he-stood-up the old-man, he

sō émac, kwínātas tē siyácins, sōtl tē ménas, tē yáctem ā tē qāmémanes, went walking, he-took-it the pack-his, belonging-to the son-his, he packing the old-man, tē sō yileín, tē sōtas ā tē ónkāts tle stólō, tē tuk tlúkasas, tē pōks tē he goes back, he reached the centre of-the river, it broke pack-saddle-his, it fell the siyácins ā tē séwōts, tē kwínātas, tē kwínātas, tē kwínātas. pack-his into the water, he clutches-at-it, he clutches-at-it, he clutches-at-it.

(The repetition here marks the old man's efforts to recover his pack.)

Kum tē sōtas ā tē tlup séwōts, kwōkwōi tē qāmémanes. Tē kwō-séluq^s tē
Then he reached the deep water, drowned the old-man. He floats-away the
qāmémanes, tē kwutL tūa kwéuktlai steqwét éi kwéuktlai, tē
old-man, he became changed-into a-piece-of-wood an-exceedingly pretty piece-of-wood, he
sōtas ā-te-pála swíya, tē sóqtem ā tē keq skálmīuq. "Steqwét éi tle
reached another country, he saw there many people. "Very handsome that
kwéuktlai," tē kwínātem etle netcáli slánai, tē qóstwas ā tē
piece-of-wood" (said one), she took it with-her one woman, she carried-it to the
tlumstans, sōtēwon tle slánai: "ne-k-wást skwa we-étlten-an," tē kwutL
house-her, she-thinks the woman: "my-plate will-be when-eat-I," it became
tlék-wom, kum tē étlten tle slánai, tē kwínātas tle kwéuktlai, tē qēalétas
dark, then she ate the woman, she took the piece-of-wood, she placed-upon-it
tē séltlens, tē qáqōqes kum kwō^s aukq tē séltlens, tē kwínātas tle
the food-her, it was-a-little-while then elsewhere all the food-her, she seized she
kwéuktlai nemácas, tē sō umkwát tle kwéuktlai ā tē ōnyans tē tlumstans,
piece-of-wood threw-it-away, it fell down the piece-of-wood in the centre-of the house-her,
tē k-wák'at tle kwéuktlai, tē kwutL tūq mémans, té-tlōms
it began-to-cry-like-a-baby the piece-of-wood, it became changed-into a-little-child, she
sōs kwínātas, tē tlótlōtas, mōs sk'elt kum tē kwutL tē-stōmic, émac tē
went (&) took-it-up, she brought-it-up, four days-only then he became a-big-man, walking he
sō améwit ā tē úlawims, tē sóqtas tē ménas, tē nōpiwonem ácislat^s tē
went home to the house-his, he saw the son-his, he meditates to-take-revenge-upon the
menas. Té-tlōms sō, kwaiée, tē sō ā tē sálnētc tē siya, tē wātc
son-his. He went, he-stood-up, he went to the back-of a tree, he defecates
néā-tá-tlōm, tē ótlōtas tle wātc: "éi kwes tūq skwéekwākwilác we-
there, he instructs his ordure (thus): "Good that-you become little-birds when
kwutLas skwa tēne-ména." Tē sō yū tē qāmémanes, tē taútas tē ménas:
he-comes shall my-son." He went home the old-man, he says-to the son-his:
"Ména, steqwét éi tle skwéekwākwilác kwō^s-sóqt-an nē ā tē síya." "O,"
"Son, exceedingly pretty the little-birds just-now-saw-I in yonder tree." "O,"
tē sōt tē ménas. Tē kwínātas tē sluk's ée tē haiyaíetans, kum té-tlōms sōs,
he replies the son-his. He took the bow-his and the arrows-his, then he set-out,
tē sóqtas tle skwéekwākwilác, tē tōtsōtas ā tē haiyaíetans, kum qā stcalámus kum
he saw the little-birds, he shot the arrows-his, then not able then
tōts-núq-ūas, kum tē sō tē síya ā tē kwátam, kum tē teat kwín-núq-ūas tle
to-shoot-them, then it went the tree up-to-the sky, then he now seized-them the

skwéekwākwilác; tē kwutL tōq wate; tē mátau tē tcálics;
 little-birds; they became transformed-back-to ordure; he shook the hands-his;
 té-tlōms yiltlátcems, kum qā stcalámus kum sóqtas cī-qutluk. Té-tlōms qatēms
 he looked-down, then not able then to-see down-below. He cries;
 té-tlōms sōs élēcōt ā tē kwátam; tē sóqtas tē kwátam; tē stēqwét éi
 he went-up-to (the) top to the sun-land; he saw the sun-land; it very fine
 swíya; tē sō émac, tē kánam-nūq-ūas ckwaméqim, tē sóqwitas, tē
 country; he went-on walking, he heard-it a-knocking-sound, he went-near, he
 sóqtas tē tem'cináli qāmēmanes, aukq-áli tapós; tē tuk'aic; tē kwínātas
 perceived the two old-women, both blind; he sits-down; she takes-it (the food)
 tē yátas tle tātκόps'; tē kwínātem ā tē swáwēlōs; tē walasten tle
 she passes-it-to her companion; it is-taken by the youth; she asks the
 qāmēmanes: "Qā-tēuq kwin-nūq?" "Qā." Té-tlōms kwāls tle
 old-woman: "Not-you get-it?" "No" (the other replies). She questions the
 (This incident is repeated three times.)
 netcáli qāmēmanes: "Nōwila émats?" "ē." Té-tlōms kwínāts
 one old-woman: "Are-you my-grandson?" "Yes" (he replies). He takes
 tē stélmūqs, tē k'eláces ā tē séwōtl tē sáliya, tē tlētóstas tē qāmēmanes.
 the medicine-his, he puts into the water the leaves, he sprinkles the old-women.
 Té-tlōms skwédams tē qāmēmanes. Té-tlōms sōs émac tlal tē swáwēlōs;
 They open-their-eyes the old-women. He went-on walking again the youth;
 tē sóqtas tí-stōlō, keq tcálictēn, tē kwínātas tē skópcins, tē nemáces ā
 he perceives a-large-river, many salmon (there), he took a leg-hair, he threw-it on
 tē swíya, té-tlōms kwutL spa stēqwét kluk^u swénām etle qailem; tē kwínātas
 the ground, it began-to grow very strong like unto-a line; he took
 tē tem'cinákwōm,^s tē sō yilácéstwas ā tē qāmēmanes, tē saiyūstas ā tē
 two-pieces, he went back-again to the old-women, he showed-them the
 tem'cinákwōm, tē taútas tē qāmēmanes: "stēqwét keq tcálictēn ā tē stōlō."
 two-pieces, he told the old-women: "very many salmon in yonder river."
 Té-tlōms snats tē qāmēmanes: "neátela tī etle swóltēn!" Té-tlōms kwāls tē
 He bids the old-women: "make this into-a net!" They reply the
 qāmēmanes, tcēyēmtasēt tē swáwēlōs, té-tlōms kwāls tē qāmēmanes: "O, émats,
 old-women, thank-they the youth, they say the old-women: "O, grandson,
 éi kwes qā squtlas tē kwálawon, só-tūq kwa-yū etce úlawim, sóqt-tuq
 it-is-good that-you not sorrow your mind, go-you absent-home to-your house, see-you
 kwa-tē ména ée tle siyákçū." Té-tlōms nēs kaíē tē swáwēlōs ā tē
 absent-your son & your wife." He contented remains the youth at the
 tlumstans tē qāmēmanes. Tē hōi tē kwēnas sk'ēlt kum tē kwāl tle qāmēmanes:
 house-of the old-women. It passed a few days then she said the old-woman:
 "Wéyila, émats klóm skwa es-sō yū." Té-tlōms wek'et-ēt tle
 "Haste, grandson, now shall you-go home." They opened-a-trap-door the
 qāmēmanes tē stesēt ā tē teitcīm-máli.⁹ Té-tlōms kwínāts tē tí-kátca, tē
 old-women close to the fire-place. They take a large-basket, they
 nūwícas émats, té-tlōms kraiséts tē qaillim, tē yóotas tē émats': "Qā-tāuq
 put-in grandson, they fasten-on the line, they warn the grandson (thus): "don't-you

wāwāk-wōsem¹⁰-auq wēem kaías te kátca, yékwēçōt-teūq kum tlāl-teūq¹¹ kwa
 uncover-yourself should stop the basket, just-shake-you then again-you presently
 sō pélem." Tē tlálet sōsō kum kwōem⁶ kaíyē, tē
 go-on descending." He commences to-descend when down-some-distance he-stops, he
 yékwēçōt kum qā ketltas pélem; tē wākwōsem, té-tlōms sōs emyélt ā
 rolls-about but not proceed to-descend; he uncovers-his-face, he (thereupon) goes back-up to
 te kwátem. Té-tlōms ótlōt-ēt, té-tlōms nuwēyēt tlāl; tē ótlōtas te
 the sun-land. They scold-him, they put-him-in-they again; they instruct the
 émats: "Tóí we-kānam-nūq-auq cī¹²-skékāk kum teat wākwōsem-teūq."
 grandson (thus): "Only when-hear-it-you some-crow then now uncover-yourself."
 Tē swēnām stéqas te sqūnāl-ēt étle sélas. Tē kánam-nūq-as tle
 He like-as did the instructions-their of-his grandmother-his. He heard-it the
 skékāk, kum tē teat wākwōsem. Té-tlōms sōs yíltwas te kátca
 crow, then he now uncovered-his-face. He went running-round-with the basket
 ā tī swíya, hói kwō-tlōm sōs cī te kátca. Té-tlōms sōs
 over this country, this-done, that went out-of-sight the basket. He starts
 émac te swáwelōs, tē sóqtas tle siyákçaus yācítas te menas; tē kwāl te
 walking the youth, he perceives his wife-his carrying the son-his; he calls-out the
 mēman: "Tā! tē kwō-kwutl te mā." "Tō sōs." "te ma
 little-one: "Mother! he is coming the father." "Be quiet" (she bids him). "Father
 kwō-kwutl"¹³ tē teat yilklátcem tle tans, tē sóqtas te swákátss
 is-coming" (he repeats). She now turns-round the mother-his, she sees the husband-hers
 té-tlōms tekaíc, tē kwutl emení te swákátss, tē tlals tekaíc stesét étle
 she sits-down, he comes there the husband-her, he also sits-down close to-the
 siyákçaus. Tē élemtas te ménas tē qaúqauem; tē wálaçtem te stómie tē
 wife-his. He takes-up the son-his they both shed-tears; he questions the man, he
 wálatās tle siyákçaus: "Kwintea tle netcáli ne-siyákcau?" "Kwo-³
 asks the wife-his: "Where (is) the other my-wife?" (She replies) "Long-
 wetl swákáč nētl tce man kwō⁵-swákátss."
 time-since married it is your father husband-her."

Notes and Explanations of the Text.

¹ *siyalekçaus*, distributive form with possessive suffix of third person from *siyákçau* or *siyákçā*.

² *táctcüttem*, iterative reduplication to express the frequency of his action, from *tcüttem* or *tcüttem*.

³ *keq-álí*. This compound is very interesting and shows us that the numeral suffix for "people" may be compounded with other than numeral elements, *keq* being an adjectival pronoun signifying much or many. Cf. *aukq-álí* (below in this text) = "both."

⁴ *tlōms*. This form is here given three times without the usual prefix *tē*. This is the more noticeable as *tē-tlōms* is so uniformly employed. The final *s* marks its pronominal character. When employed as a simple demonstrative it lacks this inflective element so characteristic of the third person. *tlōm* takes several prefixes, the commonest of which are *tē*, *tā* and *kwō*.

⁵ *kwō-tein*. This particle *kwō* is very interesting in its function. It is the same as the *kwō* above in the preceding paragraph. When compounded with the pronoun it has a temporal-locative signification. It refers to something that has taken place elsewhere and

earlier. Other examples of its usage are *palát kwō-kwutL ā tē ne-klúmstan*, "Often he came to my house." *Tē kwō-yūtas tēne-stcédō*, "he killed my dog." See other examples in this story.

⁶ *kwō*. Here we see another and independent usage of this particle *kwō-em*. Here it takes the verbal suffix.

⁷ *tat-kōps*. I have here translated this term as "companion," but this is scarcely the signification of the compound, *kōps* is the compound term for "fire," while *tat* signifies rather "across," "on the other side." In the *Síciatl* *tat-kōps* conveys the idea of each one sitting on the opposite side of the fire. Cf. the compound *tat-kwat* in the sentence above *nē ā tē tat-kwát tle stólō*, on the "bank" of the river, that is on the "far" bank. *tat-nénis* in the sentence above, *tē kwasas tat-nenis*, it warmed "all of them."

⁸ The suffix seen here is the numeral suffix for long round things.

⁹ *-māts* is a suffix used in various compounds with the sense of "place."

¹⁰ *wāwāk-wōsem-auq*, reduplicated form of *wāk-wōsem*. This form is employed here to impress upon the youth that he must not keep bobbing up his head to see what progress he was making.

¹¹ *tlal-teuq*. We have here a good instance of the adverb taking the pronominal inflection of the verb.

¹² *cī*. This particle always conveys the notion of "remoteness" or "out-of-sight-ness." Cf. *sōs cī tē katca* (below), "went out-of-sight the basket."

¹³ *kwō-kwutL*. *Kwō*, as employed in this compound, implies that the father and husband was looked upon as being "lost." He had vanished from his wife's and child's sight entirely. *tē kwō-kwutL* might perhaps be better rendered by "the lost one is returning."

The Sun Myth.

There was once an old man who had a son. The youth had two wives. He was a fine hunter, and often went hunting with his companions. One day, when they were all out hunting together, they got very cold. In order to warm them, he went up to a tree and kicked it. Immediately the tree began to burn, and they all gathered round to warm themselves. When they were well warmed, they set off again on their hunting. Presently they came upon some mountain-goats and deer. The young man killed them all. They then cut up the game and each taking his pack started homewards. When they came to the river, the youth, whose name was *Tleyekóckin*, left his pack on the bank and went on home without it. When he arrived, he informed his father of what he had done, and bade him go to the bank of the river and fetch the pack. The old man set out, and, reaching the spot, proceeded to pack home the meat. As he was crossing the river his pack strap broke, and the pack fell into the water. He made a clutch for it, but failed to secure it; again he tried, and yet a third time, but failed to secure it. By this time he had got into deep water, and the current carried him off his legs and he was drowned. He floats off down the river, and as he goes he is changed into a piece of wood. In course of time the piece of wood is carried into a strange country. There are a great number of people about there, and a woman, seeing the piece of wood took a fancy to it, drew it out of the water, and took it home with her, saying as she did so: "I will use it for a dish when I eat." At supper-time she took the piece of wood and placed her food upon it; but she had scarcely begun to eat when all the food suddenly vanished. Thereupon she took up the piece of wood and threw it from her. When it fell it began to cry like a baby, and, in a moment, was changed into a little child. She went to it,

and took it up and nourished it; and in four days the child became a young man. Soon after he set out for his own home. When he arrived, and saw his son, he determined to take revenge upon him. So he went to the side of a tree and defecated, and gave instructions to his excrement in this wise, "When my son comes, I desire that you shall be changed into little birds." The old man then went home, and said to his son: "Son, I saw just now in yonder tree some very pretty birds." "Yes," said the son, "I will go and get them." So he took his bow and arrows, and went over to the tree. He shot all his arrows at the birds, but was not able to kill them. He then climbed the tree, and as he climbed the tree stretched upwards into the sky. He presently reached the birds and as he sought to seize them, they turned to excrement in his hand. Shaking his hands to cleanse them, he sought to descend the tree, but was no longer able to see down below. He wept at his predicament, and proceeds to the top of the tree and arrives in the Sun-land. It appears to him to be a very fine country, and he sets off walking. Presently he hears a strange knocking sound, and on approaching the spot from whence it came, perceives two old women who were both blind. The noise is caused by one of the old women preparing their food. He sits down beside them, and when the old woman passes the food she has crushed to her companion, he intercepts it and eats it himself. The one who had been thus robbed cried out for her share. "Did you not get what I just passed you?" questioned the other. "No, I have had none." Again the other passes her food, and again it is intercepted by the young man. Three times this is done, and then the old woman who was passing the food suspected the presence of someone among them, and called out: "Are you my grandson?" The young man replied in the affirmative, and, taking some medicine leaves, puts them in water and sprinkles the old women with the liquid, and thus restores their sight. He then left them, and went on walking. Presently he came to a large river, in which were many salmon. Pulling a hair from his leg, he threw it on the ground and immediately it became a strong line. Taking the line, he returns to the old women, and told them that the river beyond them contained lots of salmon, and bade them make the material he had brought into a net. The old women thank the youth, and one of them says to him: "Oh, grandson, don't disturb your mind about your going home; you shall get back all right by-and-bye to your wife and son." The young man curbs his impatience, and abides in the house of the old women. Some few days later, the old women said to him, "Get ready, grandson, now you shall go home." Thereupon they opened up a hole close to the fireplace, and, taking a large basket, bade the young man lie down in it. They then attach a long line to the basket, and instruct the youth in this wise: "When you are going down, if the basket should stop, don't uncover yourself; just shake it, and then it will go on descending again." They then let down the basket, which continues to descend without any trouble for a considerable distance, but presently it stops. Forgetful of the old women's instructions, he uncovers himself to learn what is the matter, but no sooner has he done so, than the basket immediately returns to the upper

land. The old people scold him for his disobedience, and further instruct him saying: "Only when you hear a crow calling, then uncover yourself and get out; that will be your country." This time he did as they told him, and after a while got to the bottom and heard the cry of the crow. He thereupon uncovered himself, and got out, and taking hold of the basket, ran round with it in a great circle till presently it was drawn up again to the upper regions. When the basket had gone out of his sight he set off walking and presently perceives before him his wife carrying his son. The little one recognizes him and cries out: "Oh, mother, here is my lost father coming back." The mother chides him, and bids him be quiet, but the boy cried out again: "My father is coming." The mother now turns round, and perceives her husband. She sits down, and he comes and sits down by her side and takes the little boy in his arms. They all shed tears of gladness at their reunion. Presently the man questions the woman and asks where his other wife is. She tells him that his father had taken her soon after his mysterious disappearance.

Those familiar with the folklore of the Thompson Indians will at once perceive that this story is a somewhat imperfect version of Snikiáp and his son N'tlikcumtem. Throughout the whole story there is a lack of local detail. This, and the several omissions, mark it as a borrowed form. It reached the Síciatl very probably through the Lillooets.

Stcálisten Sqáqēam.

Salmon Myth.

Netcáli méman qáqaelem nē ā te kwótlkō,¹ kum tē kwínātem ā te
 One little-boy swimming in the sea, then he was-taken by a
 stcálisten, tē nekúmsōm, tē sō te E-ci²-tlup, tē sóqtas
 salmon, he dived, he went-down the into-unknown-depths, he saw (the)
 ci²-tlup, qāk't' séwōtl nē, stēwéqt tciq, te stcálisten qā stcálistenas³
 far-bottom, no water there, very dry, the salmon (was) not merely-a-salmon
 swēnām kwa E-ci²-skálmīūq, tē sō améwitenōm te méman, tē nē te mēman
 like-as some disguised-person, he goes he-takes-home the boy, he is the little
 skwióts ā te stcálisten. Pála skwómai tetē skwinés te méman sk'alsét ā te
 slave of the salmon. One year there stays the boy along-with the
 stcálisten. Tē hói te pála skwómai, kum tē hóiya te stcálisten.
 salmon. It is-finished the one year, then they are-ready the salmon (for
 qáqawom te qēqēqōi stcálisten. Sqats kwes kwutL
 the spawning grounds). crying the little salmon. They-desire that-they go
 skumét ā te stlátlanēt, kum tē kwāl te qāqamēmanes⁴: "Qā-tcálap çāp
 with the parents-their, but they say the old-people: "Not-you yet
 skumét, mōs skwa skwómai ci²-hói, kum teat sō-tcálap." Kwénētem ā
 with-us, four shall-be years yet-completed, then now go-you." It-is-seen by
 te méman te slelāçōts te stcálisten. Té-tlōms olōçēt ā te snukqítl-ēt.
 the boy the doings-of the salmon. They get-into-they the canoes-their.

tétlōms kwutL-ēt ā te stéltōlō,⁵ steqwét kwáckwic, keq te stēlēmāt,
 they come-they to a creek, very glad, much the singing, (and)
 māmāk·Em⁶ ā te tī-sénkō. Teqwānōm⁷ ā te stécalisten te kwo-kwói te
 jumping in the big-water. It-is-known to the salmon when dead a
 swákātsōtl⁸ ée te ménasōtl⁸ ée te sīaiyasōtl.⁸ Tē kwutL améwit te méman,
 husband or a child or a friend. He comes home the boy,
 tē taútas te stlatlatlas: "Qā-teap hōqsīstap⁹ te stécalisten
 he instructs the relatives-his (on this wise): "Don't-you break-neck-you the salmon
 kwes ōts kwutL āmenī ā te stōlō."
 when first come into the river."

Notes and Explanations of the Text.

¹ Kwútlkō means the "inner sea" or waters of the channels and inlets in contradistinction to *sénkō*, the sea proper or ocean.

² See notes on this particle in preceding text.

³ The animals of the myths are always regarded as different from those now living.

⁴ *Qāqāmēmānes*, reduplicated form employed here to mark the saying of the several parents.

⁵ *Stéltōlō*, diminutive of *stōlō*, river.

⁶ *Māmāk·Em*, reduplicated to express repetition of action.

⁷ *Teqwānōm*, to know *intuitively* without information.

⁸ Suffix of "post" states and conditions, uniformly employed in this manner in this dialect to mark the "dead" from the "living."

⁹ *Hōq-sīst-ap*, a compound term with incorporated object.

The Salmon Myth.

A little boy was once swimming in the sea when he was seized by a salmon. He was taken down into the lower depths and saw the bottom of the sea. There was no water there, everything was quite dry. This salmon was not a common salmon, but a person who could assume salmon form. He took the boy home with him, and made him his slave. For a whole year he lived with the salmon. When the year had passed, the salmon got ready to start for their spawning-grounds. All the little salmon began to cry to go too, but the old people remonstrated with them, and told them they could not go till they were four years old. The little boy observed all that the salmon did, and took note of their lives and doings. When they were ready to start, they all took their canoes and made for a small stream. They were a very glad and merry party, and sang and jumped in the water. When the salmon went up the stream into shallow water, the little boy got out and went home and instructed all the people how they should treat the salmon. They were on no account to break the neck of the salmon they caught in the early days of the run, he told them, or the salmon would never return.

It is believed that the salmon always know when anyone is dead. They will never go near where a corpse lies.

TE Kaikq ée TE Skaíakenēk.

The Eagle and the Owl.

Pálát tcateátetlem TE kaikq ée TE skaíakenēk. Qāqai-nūq-as-ēt
Always hunting (were) the eagle and the owl. Killed-them-they
TE KEQ títateélmiūq, STEQWÉT KEQ TE tlenakwēt ēE TE slēuk ā TE tlumstanēt.
the many animals, very many the skins-their and the meat in the house-their.

Qāk't' siyákçauēt. NE-ā-te-pála sk'ēlt kum tē sō émēwec TE tēm'cināli
(But) no wife-they. One day then they go for-a-walk the two

kaieqneqwēwes¹ tlentlānai. Tē sóqtasēt TE tlumstan, tē sō tek'ajc,
young-sisters women. They saw-they a house, they went (and) sat-down,

tē tléwēt ā TE pála láas, kum tē sō tle kúti ā-te-pála láas. Tē sō
the elder on one bed, then she went the younger on-the-other bed. It came

nánat, kum tē kwutL améwit TE kaikq. Tē qáqōqes, kum tē tlāl
evening, then he came home the eagle. It was-a-little-while, then he also

kwutL améwit TE skaíakenēk. Éí TE kwálēwon-ēt stemtómic ā TE
came home the owl. Glad the hearts-their men for the

siyálekçau-ēt. Tle kúti siyákçaus TE kaikq; éi méman TE ménas. Tle
wives-their. The younger wife-his the eagle; fine little-boy the son-hers. The

tléwet siyákçaus TE skaíakenēk; hóham TE snas ména. Tē sō puksátas
elder wife-his the owl; (a) frog the her child. She went she-put-it

ā TE selátl. Aukq sk'ēlt cūtcātcetlem-ēt. Tē qáqōqes kum kwō-qā
in the lake. Every day hunting-they. It is-a-little-while they not

améwitasēt. Slukám TE siyálekçauēt. Té-tlōms sōtiwonēt TE slentlānai:
come-home-they. Waiting the wives-their. They think-they the women-thus:

"Nétlya tle sqenám² kwō-qai-ēt tcems swálekats-ótl." Té-tlōms kwínāt-ēt
"May-be a monster has-killed-them our deceased-husbands." They it-take-they

étla tléwēt, kum tē yáctas TE ménas tle tlālqetal tle kúti. Tē sō
of-the elder, then she packs the boy-her she does-likewise the younger. They set-out

émēwec, tē tēsmētas-ēt TE selátl, tí-látl, STEQWÉT tī-selátl. Té-tlōms kwáls
walking, they arrive-at-they a lake, a-big-lake, a-very big-lake. She exclaims

tle kúti: "Tcastūmutc't-kwála kwōms sō kwe-témīūq?"³ Té-tlōm
the younger: "What-shall-we-do that-we-may get-to the-other-side?" This

sōsōtēt étle tctctas: "Çōsomteuet, sō-c't kwa kwe-témīūq."³ Té-tlōms
reply of-the elder-sister: "Be-quiet, go-we presently across." They

kwínātēt ā tle tléwēt TE hóham-ménas. Tē yátkáitas ā TE qailem; tē
take-they of the elder the frog-son-her. She puts-in-his-mouth a line; she

qáetas: "sōla nesím ā TE tā-témīūq³ TE selátl." Qáqōqes kwes tē sōsō
bids-him: "go swim to the far-side-of the lake." Presently when he is-going

tle hóham kum titaiyak. Tē yilicín; tē tcéyitem ā TE slaktlas.⁴
the frog then gets-angry. He turns-round; he is-encouraged by the mother-and-aunt.

Té-tlōms sōs tlāl. Tēmtlālt ā tā-témīūq.³ Té-tlōms tlaúitsēt tle
He starts afresh. They-arrive at the-other-side. They behind-leave-they the

hóham. Té-tlōms sōs ēmac-ēt tlāl. Tē qáqōqes kum tē
 frog. They set-off walking-they again. It is-a-little-while then they
 kánam-nūqasēt cī-qálōkōm. Tē sóqtasēt tē tlumstan; tē sō ótōtūq;
 hear-it-they a-strange-noise. They perceive a house; they go into-the-house;
 tē sóqtasēt tē swálekatsēt sōaqai. Qáqōqes kum tē kwutL éná
 they see-they the husbands-their in-a-dying-condition. Presently then she comes there
 tle Yanēqémekwon. Tē qaiēm; té-tlōms kwāls: "Mēwéla! sō-c't káksém."
 the " She laughs; she says: "Come! let-us-go play."
 Té-tlōms sówēt. Tē kwómōtem ā tle tléwēt tē temtl ée tē skwōq.
 They go-they. It is-placed-in-mouth by the elder the red-paint and the white-paint.
 Tē yátas tē ménas ā tē qaiēm. Té-tlōms sōs qaiqaiçōt. Tē pektas tē
 She gives the boy-her a line. They start sliding-down. She spits-out the
 temtl ée tē skwōq. Tē qaiēm tle Yanēqémekwom; sôtēwon kwes-
 red-paint and the white-paint. She laughs the " ; thinking that-
 kwō-skwói tle slánai. Tē tlálat qáqáqiem, kum tē qāmālaútcistem
 she-is-killed the woman. She keeps-on sliding, then she touched-her-on-the-shoulder.

[The younger sister repeats the same trick.]

Tē kwāl tle Yanēqémekwon: "Steqwét éi tē mākén-elap,
 She says the " : "Very fine the hair-your,
 tcatcastqtcelap?" "Teāt-c't kutlkwat tē kweléti ée tē kwās qafels,
 how-make-grow-you?" "Put-we on-the-crown some pitch and some hot stones,
 tlōms kwutL pā tems mākén." "Hútas tōm'céla!"
 thereupon comes growing our hair." "Do-it to-me!" (she demands).
 Té-tlōms hútas-tówēt. tē nī, tle netcālī, ā tē kwīlas, kum tē nī,
 They set-about-it-they. She (standing) by, the one, the belly-her, then she by,
 tle netcālī, ā tē életcens. Té-tlōms kwátsēt tē kweléti ée ita kwās qafels.
 the other, the back-her. They put-they the pitch and also hot stones.
 Tē yásētas tē-snas mākén, kāk'elnantas. Tē kwāl tle sqenám:
 She throws-forward her-own hair, she-is-befooled. She calls-out the witch:
 "Un-nun-na! qus-tean." Tē ótlōtem káiyē. "Tē wetl-kwutL pā tē
 "Oh!-Oh!-Oh! sore-I-am." She bid-her be-quiet. "It is-coming to-grow your
 mākén." Tē tlálat skwinét kum tē kwói.
 hair." She again cries-out then she dies.

Notes and Explanations of the Text.

¹ Kaiēq-neq-wē-wes. This is a synthetic term of relationship very difficult to render into English. *Kaiēq* is a word used to designate a younger brother, sister, or cousin. *Neq* appears in terms which express relationship to one's wife's people as: neq-teūmáicten = wife's brothers and sisters, neq-wē-nem-ten = wife's relations generally, and the latter elements of the compound are seen in the term for "youths."

² Sqenám. The use of this term in Siciatl is very interesting. It is the term for "Doctor" in the Halkōmélem and Sk'qōmic.

³ Kwe-témūq, cf. with this tā-témūq below. These prefixes are locative particles with meaning similar to the *cis-* and *trans-* of the Latin.

⁴ There is no equivalent for this term in English. Both mother and aunt are equally *slaktlas*.

The Eagle and the Owl.

Once upon a time Eagle and Owl lived together in the same house. They were great hunters, and always had a goodly supply of meat on hand; but there was one thing that they both lacked and that was the possession of wives. They were both wifeless. Now it happened one day when they were off hunting, two young women, sisters, in one of their walks came by where Eagle and Owl lived, and seeing their house went into it. On entering they perceived that it contained two beds, and the elder sister straightway appropriated one of these, and the younger the other. A little after sunset, Eagle and Owl returned from their hunting and found the young women there. They were delighted to see them and each took one to wife; Eagle choosing the younger and Owl the elder sister. In due course of time each woman gave birth to a son. To the younger was born a fine male child, but the offspring of the elder was a frog, which the mother placed in the lake as soon as it was born. Eagle and Owl continued their hunting and went off day by day into the woods as before. One day they failed to return when night set in. The sisters waited day after day for them, but they came not. Said one to the other, "I fear some dreadful monster has killed our husbands, and they will never return to us more." At last they determined to wait no longer for their coming but go and search for them. So they set out together, each taking her child with her. When they had been walking for some time they came to a very broad lake, and the younger said to the elder, "How shall we ever get across?" "Oh, don't you worry about that," was the response, "we shall get across all right presently." And as she spoke she took a long line and fastened it in the mouth of her frog-child like a bit, and instructed him to swim before them across the lake, while they would follow after walking on the line. When they had gone some way in this manner the frog-boy grew restive and stopped and turned round; but his mother and aunt soothed and encouraged him and he set off again, and in course of time they all reached the other side in safety. Here the women left the frog at the edge of the lake and set off walking again. When they had been travelling for some time they heard a strange noise and perceived before them a house. They enter this, and find their husbands there at the point of death. Presently the witch-monster, whose house it was, came home and found them there. Her name was Yanēqēmēkwon. She grins when she sees the women; and, in order to destroy them, proposes that they shall play at sliding down the mountain. Now this mountain, after a short declivity, falls abruptly, and precipitates the venturesome slider into a yawning chasm, hundreds of feet below. Thus the witch-monster thought to rid herself of the wives of her victims. But the elder sister took the magic line she had used in crossing the lake, and, fastening one end about herself, gave the other to the little boy to hold. She also, the better to deceive Yanēqēmēkwon, put into her mouth some red and white paint. After that, she started to slide down the mountain side, and as she vanished over the edge of the chasm, she spat out the paint which

she had in her mouth. The witch-woman, perceiving this, believed it to be her brains, which had been dashed out in her fall. Thereupon she laughed a hideous laugh, but even while she laughed the woman returns, brought back by the elastic strain of the magic rope, and touches her on her shoulder, and she perceives that her scheme has failed. It is now the younger one's turn to slide. But she does the same as her sister; and when the witch is laughing in glee over her supposed death, she in like manner is drawn back, and to the witch's astonishment, stands by her side unhurt. Yanēqēmēkwon is now struck with the long glossy hair of the two women, and openly admires it, asking them how they make it grow so luxuriantly. It is now the sisters' turn to deceive. So they reply that the abundance of their tresses is the result of their putting pitch and hot stones on their heads. Yanēqēmēkwon requests them to treat her hair in like manner for her. They consent, and set about doing it, the one standing behind, and the other in front to hold her down. They cover her head with pitch, and then place burning stones upon it; and the woman behind brings forward her own hair and lets the ends hang down over the witch's face in order to induce her to believe it was her own hair growing. The pain of the burning pitch and stones makes Yanēqēmēkwon struggle and cry out, but the sisters hold her down, bid her keep quiet, and declare that her hair is beginning to grow. The increasing pain makes her struggle and cry out again, and she would fain have rid herself of the cause of her agony, but it is too late now, and she presently expires.

TE ASQ ÉE TE SKWÁTŌ.

The Seal and the Raven.

TE skwátŏ nē tle ális asq. Tē sō te skwátŏ ólōtl ā te snukqítls. Tē
The raven had a sister seal. He went the raven into the canoe-his. He
sō tas ā te skwinés tle ális. Tē neúmtē ā te sétltēns. Tē
went there on a visit-to his sister. She prepared some food-her. She
tepenatcōiyem tle asq, tē sātēq te sqes. Tē éltēn te skwátŏ; tē hóiyūcin.
roasts-her-hands the seal, It drips the oil. He eats the raven; he is-satisfied.
Kum té-tlōms kwāls: "nes-qat kwens cōstōq cī-tōla ā te tūiqel." Té-tlōms
Then he says: "I-desire that-I adopt one of the family." She
kwāls tle asq: "ēí nētl skwa tle kéek'tī sōswauq." Té-tlōms sōs te
replies the seal: "good it-is shall the youngest go-with-you." He went-to the
skwátŏ tcau ólōtl tē ā te snukqítls k'asēt ée tle sélūhs. Tē sō yilyilcin.
raven beach into he the canoe-his they-get and the niece-his. They go back.
Tē sō ónēwon. tē wálatas tle sélūhs: "Qá-ā-teūq kwók'amaup?" Tē kwāl
He went half-way. He questions the niece-his: "Not-you thirsty-you?" She answers
tle méman: "Kwók'am-tein." Té-tlōms tlálic te skwátŏ. Tē tékōm.
the little-girl: "Yes,thirsty-I-am." He pulls-ashore the raven. They jump-out.
Tē k'elōsem tle méman tē sitéakwatē k'le skwátŏ. Tē kwóinōm
She stoops-to-drink the little-girl she is-struck-on-the-head by-the raven. She is-killed
k'le skwátŏ. Tē ólōtl tūas ā te snukqítl; kum tē sō yū. Tē sō
by-the raven. He puts her-into the canoe; then he goes home. He arrived

améwit. Tē tlaácin ā tle sēliūhsōtl. Tē aukq hūtas-tūas tēq
 home. He feasted on his deceased-niece. He all did-the-same-to every-one-of
 sēliūhtens ōpenāli ita tem'cināli. Tē aukq qai-nūq-as tēq sēliūhtensōtl, kum
 nieces-his ten and two. He all killed-them all nieces-his-late, then
 tē teat sō mē tas tle ālis. Qats tlāl kwes-kwōiyūts. Kum tē qā
 he now went came there his sister. Desires-he also that-he-may-kill-her. Then he not
 kwōi-nūq-as. Tē qētem, sō ā tē séwōtl. Tē ōlōtl ā tē snukqōtls,
 kill-her. She jumps, she-goes into the water. He gets-into the canoe-his,
 kum tē sō yū. Mai stōmic tē skwātō, steiltcilōtl, kwōkwōqals, kēq
 then he goes home. Bad man (is) the raven, always-stealing, always-murdering, big
 éwon. Kēqāli tē siyālekçaus. Tē taiyākemfitem ā tē Qeqals, tē aiyuwatem,
 liar. Many the wives-his. He makes-angry Qeqals, He is-transformed,
 tē kwutL tūq qaiels éē tle siyākçaus. Hōi.
 he becomes changed-to stone and the wife-his. Finished.

The Seal and the Raven.

Raven, who lived in one part of the country, had a sister named Seal, who lived with her large family in another part. One day, Raven determined to visit his sister; so taking his canoe he set out. Upon his arrival, Seal set about preparing a meal for him. She did this by roasting her hands before the fire and catching the oil from them as it dropped into a dish. When Raven had satisfied his appetite, he told her that he desired to adopt and take home with him one of her children. "Very good," replied Seal, "you shall have my youngest daughter." In a little while Raven set out for his home, taking his youngest niece with him. When they were about half-way there, Raven asked his niece if she were not thirsty. She replying in the affirmative, he pulled ashore. She got out of the canoe and stooped down to drink. As she was stooping, Raven struck her on the head and killed her. He then places the dead body in the canoe, and makes straight for his home. When he arrives, he holds a feast and devours the body of his niece. In like manner, he got possession of all his nieces, twelve in number, and devoured them in the same way. When all his nieces had thus been disposed of, he makes up his mind to kill and devour his sister Seal; but she is too clever for him. When he attempts to kill her, she jumps into the water and gets away. Thus defeated in his purpose, he has perforce to return home empty-handed. His many crimes and wickednesses shortly after so incensed the Sky God Qeqals that, to punish him, he turned both him and his many wives into stone.

A Siciatl Prophecy.

Netcāli qāmémanos tēqwoneqōs tēt-aukq-stam. Qā siyūwās, sukwénam ā
 One old-man foreknew everything. Not shaman, same-as a
 cī-"prophet." kwéakwēkwāl ā cī-kwātem. Qōçōt nētl cī-kwātem-
 prophet. Always-speaking about the-unseen-world. He-taught it was the unseen-sky
 sātlan. Tē neāt tōmōsōtl. Netl tē neāt-ōtl tet-aukq-stam. Tēqwōnéqōs
 power (who). He made the-ancients. It-was he made every-thing. He foreknew

cī-qalēten kwutL skwa ā te swīya. Qōqwaiaqātem ā te skālmīūq.
 far-off-white-man come will to this country. He-was-disbelieved by the people.

NEētēm kwēs keq aīwons. Teqwōnéqōs te cēman kwēs kwutL skwa
 It-was-regarded as big lie-his. He fore-told the warriors that come shall
 qailēq.
 to-fight.

A Siciatl Prophecy.

There once lived an old man who was able to foretell everything that was going to happen. He was not a shaman but a true prophet. He was always speaking to the people about the other world. He taught them that it was the unseen Power above who made the ancients and that He had made everything they saw. He foretold of the coming of the unknown white men to this country. The people did not believe him; they regarded his statements as great lies. He also foretold of the coming of their enemies in battle.

NOTE.—My informants told me that this person lived some generations ago before the coming of the priests.

Tradition of a Great Snowstorm.

The old people of long ago tell a story of a severe snowstorm. So deep was the snow and so long did the storm continue that the people died in great numbers from lack of food. Only the very wealthy were able to procure food at all. To such a pass were the poorer people driven that they not only ate their dogs and everything else they could lay their hands on, in some instances their very children.

This story would appear to be based on actual facts. The tradition of a fearful and prolonged snowstorm is common to most, if not to all, the tribes of this region; and a similar story is recorded with much graphic detail by the old people among the Squamish.

The Thresher Myth.

Te Stālacin Sqāqiam.

Once upon a time some of the people of the village perceived a sea-otter (Keltéte). They hastened to take their bows and arrows and shoot it. The otter was struck in the tail with an arrow and captured. It is given to the man who shot it, and he kills and skins it. As there was much blood on the hair, he left the skin soaking in the water and told his wife to go and wash it. When the woman had cleansed the skin, and was washing the blood from her hands, it floated a little way out from the shore. Upon seeing this the woman pulled up her skirts and went in after it; and just as she put her hand upon it, the skin jumped up and caught the woman in its arms, being changed at the same moment into a thresher (Stālacin). Immediately the surrounding water was full of threshers. When the husband learns what has happened, he becomes very angry. He paints his face with black, white, and red paints, and puts a large quantity of eagle down upon his head. He then takes his spear and harpoon, gets into his

canoe, and goes after the threshers. When he approaches they all dive. He waits for them to come up again, but they do not come. He goes out a little further on the water and drops his anchor. He then takes off all the down on his head, and dives into the water after the threshers. When he gets to the bottom he finds a very fine country down there. Perceiving a road he set out to follow it, and presently comes to a house. When he gets close he sees a crane. It flies away crying, "ka, ka, ka!" as it goes. "Shut up, grandmother," said the man, "I want to talk with you." The crane then stopped, and the man asked her if she had seen a woman pass that way with the people. "Yes," replied the crane, "I saw a woman just now with some people going by here." The man proceeded on his journey, and presently sees in the distance the smoke of another dwelling in the centre of a fine valley. When he came to the house, he saw a wild goose there. The goose was crying out after its kind, and the man bade it be quiet. "Shut up, grandmother," says he, "and tell me have you seen a woman pass this way?" "Yes," said the goose, "she passed by here just now." The man goes on here again, and, in a little while, perceives before him the smoke of another dwelling. Upon reaching it, he sees that it is inhabited by a slēm (aquatic bird not identified). It also was making the noise peculiar to its kind. "Shut up, grandmother," said the man to it, "and tell me have you seen a woman pass this way?" "Yes," said the slēm, "she passed by here just now." The man goes on a little further, and then, by his magic power, compels the slave of the Thresher to go out and gather firewood. As the slave approaches the spot where he is, he chooses a good tree, and gets inside of it. Thus hidden, he draws the slave to him. When the slave came to the tree, in which he was hidden, he took his stone chisel and hammer, and began to cut it down. When the slave drove the chisel into the trunk, the man inside opened his mouth, caught the chisel in his teeth, and broke it. When the slave perceives that he has broken his chisel, he sheds tears at its loss. The man now comes out of the tree, and, revealing himself, said to the slave, "Give me your broken chisel, and I will make it whole for you." The slave gave him the piece of chisel, and the man put it in his mouth, and by his magic joined it to the other piece, which he still retained in his mouth, and made it perfect as before. The slave is very grateful to the man. The latter now asks the slave to help him get his wife back from his master. This the slave consents to do, and they plan together how they may outwit the Thresher. The slave chops down the tree, and the man, taking a piece of the wood, hides himself within it by his magic power, and instructs the slave to carry it home, and put it down just inside the door. It is arranged between them that after the slave has made a big fire to enable the man to see all over the house and where his wife has been placed, he shall go to get water, and when he passes by the fire, shall pretend to fall down and spill it all over the fire. Upon arriving at the Thresher's dwelling, the slave set down the piece of wood containing the man just inside the door, as had been arranged between them, started a large fire, and then went out to fetch some water. In passing by the fire on his return he stumbled and fell, casting

the water on the fire, and leaving the room in darkness. The man thereupon jumped out from his hiding place, caught up his wife and ran away with her, while the slave busied himself in starting the fire anew. When the light of the fire is cast over the dwelling the Thresher and his friends perceive that the woman has got away. They all start off to pursue her, the slave going with them. Now the slave was by far the swiftest runner of them all, and, coming first to the runaways and wishing to aid them, he pretends to fall down, and where he fell there immediately sprang up a lofty mountain between the man and his wife and their pursuers. By the time the latter have climbed the mountain, the former are well on their way, but before the man can get to the spot over which his canoe is moored they are upon him again. The grateful slave again came to their rescue, and raised a second barrier between them and the pursuers by casting himself on the ground as before. Before the Thresher people could cross this second mountain the man reached the line hanging from his canoe and jerking it violently is pulled up to the surface with his wife in his arms by his brother who is waiting in the canoe for him. They immediately pull for the shore and only just reach it in time to escape the angry threshers, who, as soon as the fugitives got to land, gave up the chase and troubled them no more.

The Eagle People.

There was once a chief who had many wives. In his tribe there was a great number of young men. Now one of these youths fell in love with one of the chief's wives. She was the most beautiful of them all. At first she would take no notice of him, but, in the end, she yielded and spent most of her time with the young man. When the chief learnt of his wife's infidelity, he sought to find who her lover was. To do this, he laid a trap for him. He sent out a number of men to collect pitch. This he spread over his unfaithful wife's bed, and the following night when the young man went to visit her he laid down on the pitch, which adhered to his back. When he essayed to get up in the morning, he found himself held back by the pitch; and, in order to get up at all, was obliged to go away with the bed-board sticking to his back. The chief was looking for this, and had the young man seized and thrown into the water. When the youth found himself in the water, he prayed to QEqals to save him. The sky-god heard his prayer, and calmed the water all around him. For ten days he floated with the tide, with the board still fastened by the pitch to his back. By the tenth day, the heat of the sun had so melted the pitch that he was able to rid himself of the board. A little while after, he found himself on the other side of the sea and drew himself ashore. He felt very sad and cried very much at the thought of his lonely condition. He threw himself on the beach, and covered his face with his blanket. Thus he remained for a long time. When the sun was well up, and he was feeling a little better, he felt something touch his feet and looked up quickly to see what it was. Seeing nothing, he covered up his face again. He had no sooner done so than he felt the touch repeated. He raised his head a second time and looked

round, but nothing was visible, and he covered himself a third time. This occurred many times; at last, feeling sure that somebody was playing him a trick, he set about discovering who it was. Instead of wholly covering his face, he so wrapped the blanket about him that he could peep out all the time. Presently he perceived a mouse come out of a hole near his feet. "I see you, Mouse," he cries, "you needn't hide any more." Mouse now stays and, sitting down by the young man's side, asks where he had come from. The youth replies, "I came from the other side of the water; Káō threw me into the sea and I floated here. But where do you live?" Mouse replies, "We have a house over yonder. Many young women live there. I am their slave." Now the young women had seen the youth, and had sent Mouse to him; and, although he could not see them or their dwelling, they were at that very moment peeping at and discussing him. One said, "I will take him for a husband." Another said, "No, you sha'n't, I will have him;" and so said all of them. Mouse now brings the youth to the house. When they got in, he perceived a number of girls sitting down in a line. Being a fine-looking young man, the women all admired him greatly and each desired to possess him for herself. He sits down before them, and the first woman asks him, "Will you take me for your wife?" Before he had time to reply, each of the others made the same request. The young man would have been greatly embarrassed if Mouse had not forewarned him of what would happen. "Refuse them all," he had told him, "except the last one. Take her for your wife; her father is a very rich man." Acting on Mouse's advice, he chose her for his wife. As they talked together, she said, "My father will come to-morrow and offer you your choice of two eagles, one the black, the other the bald-headed eagle. Choose the black one. I will take the white-headed one for myself." Next day the old man came, and did as his daughter had said. His wife now instructed him to put on his eagle's skin. She did the same with hers. "Now, I will teach you how to fly and catch fish," said she; "only be careful to follow my instructions. There is a monster who floats on the water. Don't be tempted to catch him, or he will lead you to your death." He becomes a very successful fisher, and secures all kinds of marine game such as salmon, porpoises, seals, and whales. So excited is he with his sport that he forgets all about the monster. Lying on the surface of the water, he sees in the distance what looks like a large fish. He flies towards it, and fastens his talons in its flesh. Just as he does so, his wife perceives what he has done and the great danger he is in, and flies to his rescue. He was in the power of the monster. The creature now endeavours to drag him under the water, and when his wife reaches him, only his head is visible. She seizes him by the hair and calls to her father and brothers and other relatives to come and help. They hurry to her aid and many other eagles also rush to assist. They struggle together for a long time, but, in the end, the eagles win. The monster is torn asunder, and the youth carries the portion he held ashore. They all rejoice at their success, and talk of his wonderful escape. When a year had passed by, a son was born to him. As soon as the child began to speak, he cried

incessantly for his paternal grandparents. This makes the father desire greatly to get back to his own home, but knowing how far away across the water it was, he saw no hope of ever reaching it and became very sad in consequence. When his father-in-law (Swénem) perceived his sorrow, he said to him, "Son-in-law (Steeuftas), don't be downcast: you shall go back to your home by-and-bye." The next day his father-in-law took a small canoe, and, placing a carved figure at each end, placed his son-in-law and his daughter and her child in the centre of it. He then pushed the canoe into the water, and said, "Go, carry them home." The canoe thereupon went of itself. There was no lack of food for the journey, for the old man had given them a magic glove full of choice meat which never got empty. In course of time, they crossed the sea and reached the village of the young man. It was night and very dark when he arrived, and no one knew that he had come. But next day, it soon became noised abroad, and everybody came to see him; above all, the young women of the village. They all desire to have him for their husband, but he declines all their offers. Next day he gave a great feast. His wife opened the glove in which their food was stored and took out what was left. It filled two houses. He now cooks it, and by his father-in-law's magic, is able to boil this vast quantity in one small kettle. He now invites all the people of his village to share the food with him. When they are assembled, one of the guests, whose name was Raven, makes fun of the small pot in which the food was cooking. "Somebody will go short," said he, "if that is all you have to offer us. I could put all that pot holds in my own spoon." The young man and his wife say nothing, but take three small dishes and pour the meat into them and ask the people to help themselves. This, with much scrambling, they did, and to their surprise the dishes ever remained full. Raven tried hard to empty them, but found it beyond his power. However much was taken out, more remained behind, until everybody was satisfied. When all were filled, then the pot was empty.

When their guests had all gone, the wife says to her husband, "Now you must be very careful and not go with any other women. If you are unfaithful to me I shall go away and leave you." On the following day, his wife wanting some water, he took a bucket and went to the creek to fetch her some. When he got to the creek, all the girls in the village were there on the lookout for him. One of them enticed him to go into the woods with her, and he, forgetful of his wife's warning, accepted her invitation, and went with her. Some time later, he returned to his home with the water. When he sets the water down, his wife takes an eagle quill and, dipping it in the water, holds it up and examines it. By this means she learns of his infidelity. She throws away the water, and will have none of it. Said she to him, "You have broken your promise to me. Now I must leave you." So saying she took her child, and went down to the beach. He follows her, and beseeches her to turn back. She does not stop, but bids him go home and leave her, saying as she went, "If I turn my face towards you, you will die." When she got to the water, she did not seek her canoe, but walks straight on, and the water supported her. He follows close behind her, in like manner the water also

supporting him. Again he begs her to return with him, but she answers, "Nay, I can return no more; but go you home." He replies, "I will never leave you," and continues to walk after her, beseeching her, every few steps, to stop and turn back with him. Thus they continue for a long way; and she, at last weary of his importuning, turns round towards him. Immediately the waters cease to hold him up and he sinks beneath them and is drowned.

The Mink and the Wolf.

Young Wolf one day went out hunting. When several days had passed, his friends thought he must be lost, and went to look for him. In the meantime, Mink went down to the water to fish. As he sat in his canoe fishing, he saw Young Wolf on the beach. Wolf calls to him to come ashore, but Mink pays no attention to him; Wolf, however, continues to importune him, and Mink presently pulls ashore and takes him into his canoe. When he is seated, Mink asks him if he likes sea-urchins' eggs: Wolf replies that he does. Mink then bids him help himself, saying, "Eat as many as you like, but eat only the white ones, don't eat the red ones." Wolf falls to and devours a great many. When he had finished, Mink says, "If you want to go to sleep now, lie down in the bottom of the canoe and rest your neck on the thwarts." Wolf does so, and is soon fast asleep. Presently, Mink takes his knife, and cuts Wolf's throat with it so that he dies. He now pulls ashore, skins Wolf, and takes the pelt home with him, and hangs it by the fire to dry. A little while after, Wolf's grandmother came to Mink's house to buy sea-urchins' eggs. Mink tells her to look at what was hanging before the fire. She looked up, and saw her grandson's skin, at sight of which she cries bitterly. Said Mink to her, "If you want to make that noise you had better go outside, I don't want you blubbering here." The old woman thereupon left the house, and went home. "What are you crying for?" said Old Wolf and the others. She answered them, "I am crying because I shall never see my lost grandson any more; Mink has killed him." When they hear this, they become very angry, and declare they will go and kill Mink; but one says, "Don't let us kill him in his own house, but let us get him here and kill him." In order to entice Mink to their house, Old Wolf gave a great potlatch, and invited everybody to attend, Mink among them. Now the Mink suspects some trick will be played upon him, and that the Wolf people will try to take revenge for the murder of Young Wolf; so he takes steps to outwit them. Now Knothole was his grandmother, likewise Mouse, and he gives them instructions in this wise. To the former he says, "If the Wolves spring at me, you grow big and let me through." To the latter he says, "You gnaw all the bows and paddles of the Wolf people so they cannot use them without breaking." They promise to do as he bids them. When Mink reached the Wolves' house, and was fairly inside, they all sprang upon him with the intention of tearing him to pieces, but Mink, being on the lookout for this kind of welcome, sprang through the Knothole, and ran down to his canoe. The Wolves seized their bows and arrows, and essayed to shoot him; but as Mouse had

bitten each bow almost in two, their weapons broke in their hands. Seeing this, they threw them aside and rushed to their canoes to follow after Mink on the water. No sooner are they fairly started than their paddles snap in two, and Mink gets away from them. But the Wolves are determined to take him, and get new paddles and return to the chase. After a long pull, they overtake and capture him, and would have bound him with cedar withes, but Mink said to them, "It is no good tying me with cedar I can easily break that. You had better take a kelp line and tie me with that." This they did; then Mink said, "Let me dance before you kill me." "Very good," they answered, "you shall have your dance." So they bring the canoes together, side by side, and Mink begins his dance. He dances first in one canoe, and then in another. Then he puts one leg in one canoe, and the other in another, and bids them separate the canoes a little. "Now close up again," he says, "now open wider." When the canoes are well apart, he suddenly jumps into the water and dives down between them. The Wolves search everywhere for him, but cannot find him. Presently Mink pops his head up out of the water, near the shore, and cries out, "Hullo, you people, what are you doing there?" The Wolves pull ashore after him, determined yet to kill him. Mink now enters a hole, and the Wolves come and thrust their spears in, hoping to kill him; but again Mink outwits them. When they thrust the spears in, he takes some of his grandmother's guts and put them on the spears. The Wolves seeing this believe that they have killed him, and go out in their canoes again. As soon as they are on the water, Mink comes out of his hole and shouts out, "Hullo, you people, what are you doing out there?" The Wolves hurry back, and Mink hides in his hole a second time. Again they thrust their spears in, and again he puts the entrails upon them and deceives them. After awhile, the Wolves go away believing Mink to be dead. When they had gone but a few steps, Mink calls them back with a jeer saying, "Why don't you come and take me?" Time and again he thus deceives the Wolves, who, at last despairing of capturing him, go away for good and leave him.

LINGUISTIC.

As far as I am aware, no attempt has been made to set forth the structure and grammar of the Siciatl dialect, or collect a glossary of its terms. The following notes and texts will therefore be the more welcome.

The Siciatl differs considerably from the speech of the contiguous Salish tribes; and by the Indians themselves it is considered a difficult dialect to acquire. They tell me that most Siciatl can converse in the neighbouring Slaiámon, Sk'qómic and Halkómélem, but that few, if any, members of these tribes ever acquire a speaking knowledge of Siciatl. One reason of this is that its vocables are mostly foreign to those dialects. In the compilation of these notes, another illustration was afforded of the need there is to employ more than one individual in our studies of the native speech. The differences in the enunciation of the same words by Jack Isidore and Charlie Roberts were often so considerable, that I had on several occasions to call upon a third person to determine the form to

adopt and record. The personal differences in the speakers of barbarous and unlettered languages would appear to be considerably greater than those displayed by the speakers of cultivated tongues. This, in the case of the speech of the tribes under consideration, is due mainly to the undeveloped state of their phonology and the consequent indeterminate quality of many of their sounds, the result of which is a strong tendency to permutation in vowels as well as in consonants. This tendency is very strong in S'ciatl where *n* and *d*; *m* and *b*; *ē*, *ī*, *ai*, are everywhere interchangeable in the mouth of the same person and in the same words; and it is utterly futile to attempt to get the natives to distinguish between them, particularly the consonants. To them *n* and *d* are absolutely alike in sound even when uttered by a European. The same may be said of *m* and *b*, *d* and *t*, and all other distinctions of surd and sonant. This confusion of *n* with *d*, *m* with *b*, was at first a cause of much trouble to me; for sometimes I secured the one sound and sometimes the other in the same word in different connections; but on account of the difference failed to recognize it as the same; the sound for example of *teédis-teédō*, my dog, not suggesting readily to the ear the more correct form *teén's-teénō*. Many of the differences in the vocabulary will be found to arise from this permutation, and possibly some of the difficulty which the other tribes find in acquiring this dialect is due to the same cause.

My chief helpers in my linguistic studies were Charlie Roberts and Jack Isidore. Others of the tribe gave me occasional help and assisted me in the determination of doubtful constructions and sounds.

An examination of my grammatical notes will show that the S'ciatl differs in many interesting features from the dialects I have previously examined. Thus far, all examined have shown the employment of a different root for marking the future in verbs. The S'ciatl is no exception to this. The radix employed by them is totally unlike that in any other dialect. Considerable difference is also seen in their pronominal forms; and the temporal affix *ne* or *le* of the Halkōmēlem dialects is changed to *tē* in S'ciatl.

PHONOLOGY.

Vowels.

<i>a</i> as in English <i>hat</i> .	<i>i</i> as in English <i>pin</i> .
<i>ā</i> " " <i>father</i> .	<i>ī</i> " " <i>pique</i> .
<i>â</i> " " <i>all</i> .	<i>o</i> " " <i>pond</i> .
<i>ä</i> " " <i>gnat</i> .	<i>ō</i> " " <i>tone</i> .
<i>e</i> " " <i>pen</i> .	<i>u</i> " " <i>but</i> .
<i>ē</i> " " <i>they</i> .	<i>ū</i> " " <i>boot</i> .

E obscure vowel as in English *flower*; *ⁿ* a terminal vowel only in part articulated.

Diphthongs.

ai, as in *aisle*; *au*, as in *cow*; *oi*, as in *boil*; *eu*, as in *few*.

I have called attention in former reports to the indeterminate character of the vowel in the Salish dialects of this region. This quality characterizes the

S'ciatl vowels in a marked degree, particularly the long vowels. There are also many obscure vowel sounds in S'ciatl as in the other Salish dialects; but I have refrained from multiplying the symbols for these on account of the "personal equation" in the speech of the natives; no two as a rule, as far as my ear could detect, using quite the same sound in the same phrases. And for this reason I hold that any attempt at over-refinement of sounds in setting forth the phonology of native speech defeats the end in view; the more particularly when the sounds have been gathered as is frequently the case, from one person only. For all practical purposes the symbol *E* as here used serves the purpose of indicating the obscure character of the vowel very well.

Consonants.

- b, as in English. This sound is never used in S'ciatl as the complement of p, but is a permutation of *m*.
- d, as in English. This sound is always a permutation of *n* in S'ciatl and is never the sonant of *t*.
- h, as in English.
- k, " "
- k', a strongly palatized k.
- l, as in English.
- tl, an explosive palatized l.
- L, the same but shorter.
- m, as in English, everywhere interchangeable with *b*.
- p, intermediate between our *p* and *b*.
- s, as in English.
- t, " " generally; occasionally intermediate between our *d* and *t*.
- w, " "
- y, " "
- q, as *ch* in *loch* in broad Scotch.
- q, approximately as *wh* is uttered in North Britain.
- h, as the German *ch* in *ich*.
- c, as in English *sh*.
- ç, as *th* in the word *thin*.
- tc, as *ch* in the word *church*.
- ts, as in the word *fits*.
- kw, as *qu* in the word *quantity*.

In the mouths of some of the S'ciatl initial *s*, runs uniformly into *c*. *S*, *ç* and *tl*, particularly when finals, are also interchangeable in the speech of some natives.

' marks a pause or hiatus, as : k'lemúm, to 'chop."

' written over a consonant indicates that it is uttered explosively with stress, as : t'páos, "blind."

Accent.

Accentuation in the Salish tongue is as marked as in English. But it has a wider syntactic and grammatic use than in our language. I have not yet satisfactorily determined in my own mind the basic principle of the accent in Salish. The fact that the position of the accent in the same word frequently varies in the different dialects tends to make the subject more difficult. But speaking broadly two main principles reveal themselves, viz., radix accentuation and quantity accentuation. Both these rules are frequently disregarded and the accent is shifted to some other syllable in the word for syntactic and rhetoric purposes.

It is a common principle in the Salish dialects to distinguish homonymous terms by a shifting of the accent, more particularly when the words have an etymological identity. Thus: sk'ómai, *hair*, and sk'omaí, *dog*¹; metéin, *lice*; and méteín, *testicles*.

Number.

Number is distinguished in S'ciatl in a variety of ways, as in the other Salish dialects. There appears to be no true plural, the same form being used for the singular as well as for the plural; but wherever the idea of severalty or distribution enters the distinction is effected by a modification of the stem. This is done by reduplication, by epenthesis, diæresis, aphæresis, epithesis and by vocalic mutation. Ideas of greatness, abundance or plentitude are expressed by means of separate particles. The following words offer examples of these methods, thus:—

Swáwēlōs, <i>boy</i> .	swāwēwēlōs, <i>boys</i> .
stómic, <i>man</i> .	stém̄tomic, <i>men</i> .
qaiēls, <i>stone</i> .	qeqaiēls, <i>stones</i> .
sīyákōp, <i>hat</i> .	sīsīyákōp, <i>hats</i> .
stEkaíū, <i>horse</i> .	stEktéakaiū, <i>horses</i> .
hópīt, <i>deer</i> .	hephópīt, <i>deer</i> .
teitwon, <i>bear</i> .	teitcitwon, <i>bears</i> .
tlúmstan, <i>house</i> .	tlátlumstan, <i>houses</i> .
síya, <i>log</i> .	síyam, <i>logs</i> . (This is a very unusual form.)
k'lákátl, <i>old</i> .	k'lákāwatl, <i>old</i> (several).
qāmémānes, <i>old</i> .	qāmEmémanes, <i>old</i> (several).
stōtēlēmit, <i>old</i> .	stātōtēlēmit, <i>old</i> (several).

Gender.

Gender is distinguished in S'ciatl by the use of demonstrative particles, which alone possess a formal gender; by the use of separate words, or by placing the terms for "man" and "woman" before or after the class word, thus:—

te, <i>masculine</i> .	tle, or se, <i>feminine</i> .
man, <i>father</i> .	tan, <i>mother</i> .
stómic, <i>man</i> .	tlánai, <i>woman</i> .
swáwēlōs, <i>boy</i> .	tlitlánai, <i>girl</i> .

¹ These dogs were reared for the sake of their hair, hence the term.

In Siciatl there appears to be no modification of the terms for "man" and "woman" when applied to mark gender in animals as in the Halkōmēlēm and Sk'qōmic dialects, thus: stōmic-tcédō, *dog*; tlānai-tcédō, *bitch*.

Case.

In the Salish tongue case distinctions are wholly wanting. The relations expressed by case-endings are in this language supplied by particles; the Salish being an analytical tongue like the English, with which it has many other points in common.

Reduplication.

Reduplication plays an important rôle in Salish and has deeply affected the development of its grammatical and lexical forms. It subserves a variety of purposes. Primarily its function is to express severalty or distribution. It seems also at times to denote the idea of plurality; but on this point I am not yet certain, for in many instances where it seems at first sight to mark the plural, a closer examination shows that the predominant idea is really severalty. The ideas of augmentation and its opposite, diminution, are also expressed by reduplication. It also expresses intensity, repetition, frequency and prolongation of verbal action, collectively, totality, superiority and its opposite, inferiority, and several other categories. The expression of these several ideas is effected by phonetic changes in the radix or by a shifting of the accent. In words of one syllable the whole word is usually duplicated. In words of more than one syllable the radical syllable only is duplicated. This appears to be the general rule, but exceptions are not infrequent.

Diminutives.

Examples of diminutive reduplication in Siciatl are as follows:—

tlūmstan, <i>house</i> .	tlētłumstan, <i>little house</i> .
stólō, <i>river</i> .	stótēlō, <i>rivulet</i> .
qaiēls, <i>stone</i> .	qaiqaiēls, <i>pebble</i> .
tcédō, <i>dog</i> .	cētcédō, <i>puppy</i> .
hōpīt, <i>deer</i> .	hōhōpīt, <i>fawn</i> .
kwōdōt, <i>porpoise</i> .	kwōkwōdōtōtl, <i>young porpoise</i> .
kwiniš, <i>whale</i> .	kwē(a)kwinišōtl, <i>young whale</i> .

N.B.—The suffix -ōtl seen in the last two is added to distinguish the words from homonymous forms in the language:

kwātlt, *dish*; kwākwełt, *platter*.

Other examples of reduplication will be found in the vocabularies and native texts given below.

Augmentatives.

Augmentatives in Siciatl are commonly formed by prefixing the particle tī or tē to the term, thus: tē-tlūmstan, *a large house*; tī-yōilōcōt, *a great hunter*; tī-stólō, *a large river*.

étlā-wafada, *I hurt my ear.*

étlā-wóiya, *I hurt my hand.*

tē-tein-sépai-yuk, *I struck my nose.*

tē-tein-suk-áláliök, *I hurt my head* (from something falling upon it).

suk-émáliök, *I hurt my head* (by passing through a low doorway, etc.).

lesáliök-tein, *I hit my head* (by striking the floor with it in lying down).

The incorporative forms for *house* are, -autq or -tq, for *tree* -ai, thus: naite-autq, *one house*; samitq, *two houses*, etc.; kwósen-autq, *star-house*; spal-ai, *one tree*; témcid-ai, *two trees*, etc.; cedar-tree, túqem-ai; fir-tree, pelád-ai; maple-tree, k'úmol-ai, etc.

For numeral compound forms see under Class Numerals below (p. 69).

All these synthetic forms may be rendered by the independent forms and frequently are. Speaking generally these forms are derived from the older elements of the language, and are found with slight modification in all the Salish dialects.

Compound Nouns.

The compound nouns in Siciatl are formed as in the other Salish dialects examined, by simple juxtaposition, by agglutination, and by formative elements. Abstract nouns are formed directly from the verb stem by prefixing *s* to them, thus: étlten, *to eat*; sétltén, *food*; kait, *to shout*; skait, *a shout*; kwut, *to see*; skwut, *sight*; utétôt, *to dream*; sutétôt, *a dream*; téucam, or tétéucam, *to learn*; stéucam, or stétéucam, *learning, instruction*.

Personal Pronouns.

Of these there are in Siciatl three classes, the independent, the copulative and the incorporative. The independent pronouns are:—

I, me, sáliyū.

we, tlnémōtl, or némōtl.

thou, nūwíl.

you, nūélap.

he or she, tē, té-tlōms, tā, tá-tlōms. *they*, tē, té-tlōms, tā, tátlōms.

The forms for the third person are really demonstratives, and are usually employed without distinction of sex, the context marking this. In constructions where it is necessary to distinctly mark the sex *sē* or *tlē* is used for the feminine. The distinction between *tē* and *tā*, or *tē-tlōms* and *tā-tlōms*, is just that between *hic* and *ille* of the Latin. A clear idea of the function of these demonstrative forms may best be gathered from a study of the native texts given below. In the plural the compound forms are sometimes reduplicated, thus: tátetlōms, *they*.

A selective significance is given to the pronouns by placing the demonstrative particles *te* or *tle* before them, according to the gender, thus:—

te sáliyū, *I*.

te tlnémōtl, *we*.

te nūwíl, *thou*.

te nūélap, *you*.

Copulative Pronouns.

<i>I</i> , -tein, tein-, -tean, tean-, -an.	<i>We</i> , -c't, -teat, -at.
<i>thou</i> , -teūq, teūq-, -teauq, -auq.	<i>You</i> , -teālep, -ap, -ēlap.
<i>he, she</i> , -as, -s, -tas.	<i>They</i> , -as, -aswēt, -tas, -ēt.

The function of these will best be seen in the native texts given above. It will be seen that they are sometimes prefixed and sometimes suffixed.

Incorporative Pronouns.

These forms present considerable differences from the corresponding ones in the dialects previously examined.

qatl-nōmī-tein, <i>I like thee.</i>	qatl-nōmī-teil-elap, <i>I like you.</i>
qatl-nōmī-c't, <i>we like thee.</i>	qatl-nōmī-c't-elap, <i>we like you.</i>
qatl-nōm-te-teūq (tE sāliyū), <i>thou likest me.</i>	qatl-nomōtl-teūq (tE tlnēmōtl), <i>thou likest us.</i>
qatl-nūq-ūa-teūq, <i>thou likest him, her.</i>	qatl-tlau-nūq-ūa-teūq, <i>thou likest them.</i>
qatl-nūct' (tE), <i>you like him.</i>	qatl-nōmte-as, <i>he likes me.</i>
qatl-nōmōtl-as, <i>he likes us.</i>	qatl-nōmte-asēt, <i>they like me.</i>
qatl-nōmōtl-asēt, <i>they like us.</i>	qatl-nōmim, <i>he likes thee.</i>
qatl-nōmim-elap, <i>he likes you.</i>	qatl-nōmim (aiyawēt), <i>they like thee.</i>
qatl-nōmim-elap (aiyawēt), <i>they like you.</i>	

There is a certain interesting uniformity about these forms which is wanting in the other dialects examined; throughout they have the reflexive pronominal stem nōmōt, *self*, in common. The forms for the third person are also interesting. The particle nūq seen in them is not a pronominal element proper. It is the same determinative particle which plays so important a part in Sk'qōmic constructions to which I have previously called attention.

From the following there would appear to be another method of pronominal incorporation; but this is an irregular form.

kwedēm or kwenēm = *to see*.

kwenēcētecin, <i>I see you.</i>	kwenēcēteūq, <i>you see me.</i>
kwenēcētecin-elap, <i>I see you (plural).</i>	kwenēcētecalap, <i>you see me (plural).</i>
kwenētecin t'ē, <i>I see him.</i>	kwēkwenētecin, <i>I see them.</i>
kwenēsāsēt, <i>they saw me.</i>	kwenētōmoçes, <i>he saw me.</i>
kwenēsim tE nūwīl, <i>they saw thee.</i>	kwenēçus, <i>he saw thee.</i>
kwenēsim tE nūwilap, <i>they saw you (plural).</i>	

Possessive or Adjectival Pronouns.

Of these the S'ciatl employ several distinct forms; they also make distinction between the thing present and the thing absent, the commonest form is as follows:—

*Singular.*tE-n' man (object present), *my father.*tE-na man (object absent), *my father.*tE man (object present), *thy father.*tE man (object absent), *thy father.*tE man-s (object present), *his, her, father.*tE man-s (object absent), *his, her, father.**Plural.*tE-ms' man (object present), *our father.*tE-ms' man (object absent), *our father.*tE man-Elap (object present), *your father.*tE man-Elap (object absent), *your father.*tE man-ēt (object present), *their father.*tE man-ēt (object absent), *their father.*

The above are used exclusively with masculine objects. With feminine objects the following are employed:—

*Singular.*ts'E-n' tan (object present), *my mother.*tE-n' (object absent), *my mother.*ts'E tan (object present), *thy mother.*kE tan (object absent), *thy mother.*ts'E tan-s (object present), *his, her, mother.*tE tan-s (object absent), *his, her, mother.**Plural.*ts'E-ms' tan (object present), *our mother.*tE-ms' tan (object absent), *our mother.*ts'E tan-Elap (object present), *your mother.*kE tan-Elap (object absent), *your mother.*ts'E tan-ēt (object present), *their mother.*tE tan-ēt (object absent), *their mother.*

A simpler and more intimate form is as follows:—

*Singular.*nE-tán, *my mother.*u-tán, *thy mother.*tan-s, *his, her mother.**Plural.*musnána-tan, *our mother.*u-tán-Elap, *your mother.*tán-ēt, *their mother.*

This form is employed when the object is close to the possessor of it. Examples of its use will be found in the native texts below. As the demonstrative elements are wanting to it there is of course no distinction of gender with this form. It is the form most commonly used in answer to the question "Whose is this?"

The emphatic forms equivalent to the nE-swá or ténswá forms of the Halkōmēlem are as follows:—

Singular.

teN'sÉNā stcédō (object present), <i>my</i> <i>own dog.</i>
tcEN'sÉNā stcédō (object absent), <i>my</i> <i>own dog.</i>
tes'nā stcédō (object present), <i>thy own</i> <i>dog.</i>
tcESÉNā stcédō (object absent), <i>thy own</i> <i>dog.</i>
tes'na stcédōs (object present), <i>his, her</i> <i>own dog.</i>
tcEÉna stcédōs (object absent), <i>his, her</i> <i>own dog.</i>

Plural.

tem'snānā stcédō (object present), <i>our own dog.</i>
tcEMnānā stcédō (object absent), <i>our own dog.</i>
tes'nānālap stcédō (object present), <i>your own dog.</i>
tcESnānālap stcédō (object absent), <i>your own dog.</i>
tesnānēt stcédō (object present), <i>their own dog.</i>
tcESnānēt stcédō (object absent), <i>their own dog.</i>

This word *stcédō* may also be written *stcénō*, the *d* being a permutation of *n*. I have, however, invariably employed the *d* because this sound so strongly predominates.

The particle *kwa* which plays so important a part in the *Halkōmālem* dialects is also seen in *Sfciaatl*. It fills a subordinate place, however, in this tongue. It is found in pronominal forms and marks absence as in *Halkōmélem*, but is not used in quite the same way. I have not found any distinction between present and visible, and present but invisible, pronominal forms in the *Sfciaatl*, as in the *Halkōmélem*. In the expression, is your father dead? *kwa* must always be used, thus: *kwa kwōi tce man?* Its function here is the same as in the other dialects. It marks the absence of the object, or rather, as the *tce* form does this, the absence of knowledge of the *locale* of the object spoken of. In *Sfciaatl* the particle *kwō* is used in a temporal sense in a manner peculiar to that dialect, thus we say: *kwō kukelāsélem, he is sick*, if the person referred to is in some other place. It is employed also in the following constructions: *kwō-tein kwātán tle siācin ā te tátkwat tle stólō, I left the pack on the bank of the river*; *kum kwō aukq te sētlens, then "away" or "disappeared" all the food*. *Tē kwō kutL te ma, "Father is coming."* It is found also as a compound of *tlōm*, thus: *kwō-tlōm* in contradistinction to *tē-tlōm*.

*Substantive Possessive Pronouns.**Singular.*

nEseNa, <i>mine.</i>
usENa, <i>thine.</i>
s'nas, sENas, <i>his, hers.</i>

Plural.

mEseNāna, <i>ours.</i>
us'nānelap, <i>yours</i>
s'nanēt, <i>theirs</i>

*Possessive with Verbum Substantivum.**Singular.*

nētl-tein-sENa,	<i>it or this or that is mine.</i>
nētl-tce-s'na	<i>" " " thine.</i>
nētl-tce-s'nas	<i>" " " his, hers.</i>

nētl-tcem-s'nāna *it or this or that is ours.*

nētl-tce-s'nāmelap „ „ „ *yours.*

nētl-tce-s'nānēt „ „ „ *theirs.*

It is interesting to observe the reduplication of na to mark the plural in these and the other forms. There is no distinction between “inclusive” and “exclusive” forms in S'ciatl.

A prepositional form is also used of the third person when the owner's name is mentioned. It is identical with that in the Halkōmēlem; thus: s'na tla John stēdō, *this is John's dog.*

Possession is also thus expressed in S'ciatl: “*I have a horse,*” stēkaiū teinsēna; “*you have a horse,*” stēkaiū teesēna; “*he has a horse,*” stēkaiū teesēnas, etc.

Interrogative Pronouns.

wat? *who?* wat-teūq? *who are you?* wat ci-tī neāt tī? *who made this?*

tū-wat? *whose?* wat? *whose?* nētl wat ti? *whose is that?*

stam? *what?* stam tē-tlōm? *what is this?* stam tce sqatls? *what do you want?*

stam ūya tce sqatls? *what does he want?*

kwintea? *where?* kwintea tce stēkaiū? *where is your horse?*

nētea? *which?* nētea tce tlumstan? *which is your house?*

Reflexive Pronouns.

nōmōt, *self.*

tē-tcin-sepe-nōmōt, *I struck myself.*

This form is identical with that in the Sk'qōmic. In S'ciatl it is an essential constituent of passive verb forms and incorporative personal pronouns.

Indefinite Pronouns.

ai-wat, *anybody*, watasye, *somebody.*

Demonstratives.

te, tē, tētlōm, tātlōm, *he, this, that*; tlē, sē, sētlōm, tlātlōm, *she, this, that.*

The above are used principally with the third person, but not exclusively so. When the object is other than a person the following forms are usually employed:—

tī, *this*; tā, *that* (object little distance only from speaker).

ā tā, *that* (object farther off).

ā tā teūk, *that* (object very distant).

There are no distinct forms to mark the plural. When it is desired to use them in this sense the object suffers modification, thus: tī tlātlumstan, *these houses*; tā tlātlumstan, *those houses.*

Articles.

te (masculine), tle (feminine), the, a; kwa, a.

The function of these can be gathered only from a study of the native texts. Consult also the writer's remarks on this head in the *4th Report Ethnological Survey of Canada*, 1902, B.A.A.S.

Numerals.

Síciatl abounds in class numerals. The simple absolute forms are as follows:—

1. pála.	5. çélateis.	9. túqīūq.
2. temicín.	6. t'équm.	10. ópen.
3. tcátlas.	7. tsótcis.	11. ópen íta pála.
4. mōs.	8. teátcis.	12. ópen íta temicín.

The others follow in like manner:—

20. sámpea.	50. çflatea.	90. túwīeqaca.
21. sámpea íta pála.	60. t'éqematsca.	100. tesáwite.
30. tcádauca.	70. sōtcisaca.	1000. ópen tesáwite.
40. mōsatlea.	80. teátcisaca.	

Partitive Numerals.

suk; half.

There are in Síciatl no terms corresponding to "quarter" or "three-quarters," as in the Halkómélen.

Class Numerals.

1 man, niteáli (stómie).	20 men, sam'ceáli or sabaceáli.
2 men, temienáli (stémtómie).	21 „ sam'ceáli íta niteáli.
3 „ teaçáli.	30 „ tcadaucáli or teanaucáli.
4 „ mōsáli.	40 „ mōselcáli.
5 „ sēlatsáli.	50 „ sēlatscáli.
6 „ tuqabáli or teqamáli.	60 „ tuqabatscáli or teqam'tscáli.
7 „ sōtcisáli.	70 „ sōtcisacáli.
8 „ t'eatcisáli.	80 „ t'eatcisacáli.
9 „ tūqīqáli.	90 „ tūqīqacáli.
10 „ ópenáli or ópedáli.	100 „ tesawitcáli.
11 „ ópenáli íta niteáli.	1000 „ ópen tesawitcáli.

	<i>Trees.</i>	<i>Houses.</i>	<i>Stones.</i>	<i>Hats.</i>
1	spálai ...	naítcautq ...	pálōls ...	pālaiyéuk.
2	tēm'cidai ...	sámi'tq ...	témc'dōls ...	tēmcidaiyéuk.
3	tcáçasai ...	tcādautq ...	tcatlásōls.	
4	mōsai ...	mōsautq ...	mósōls ...	mōsaiyéuk.
5	cēlateai.			
10	ōpā dai ...	ōpādautq ...	ōpādōls ...	ōpā daiyéuk.

	<i>Long round things such as fishing lines, etc.</i>	<i>Blankets, skins, clothing, etc.</i>	<i>Long things such as poles, logs, etc.</i>	<i>Round things.</i>
1	pālakwōm ...	nacáwīça ...	pālēwa ...	pelekqkwíyūs.
2	... ..	samíça ...	tēmci déwa ...	tēmci díyūs.
4	... ..	mōsíça ...	mōséwa ...	mōsíyūs.
10	... ..	ōpādauíça ...	ōpā déwa ...	ōpā díyūs.

Ordinals.

first, tlasēū, *second*, stētsít, or stēsēt = "next," "close to," *third*, stētsít tlal = "next again." All after the second are expressed as the third, until the last which is āākwaítābōt, or āākwaítāmōt.

Adverbial Numerals.

once, naítcauq.
twice, sáma or sába.
thrice, tcáнауq.
four times, mōsatl.
five ,, silátsatl.

six times, téqematl.
seven ,, tsótcēsatl.
eight ,, téátēisatl.
nine ,, túqīaqatl.
ten ,, ópenatl.

Distributives.

pápēla, *one each*.
tētēmicin, *two* ,,
tēitcatlas, *three* ,,
mómis, *four* ,,
tsētēslātcis, *five* ,,

t'éēt'Equm, *six each*.
sōōtcis, *seven* ,,
tētātēis, *eight* ,,
tētqfūq, *nine* ,,
ōōpan, *ten* ,,

tétsawitc, *one hundred each*.

*Comparison of Adjectives.**Positive.*éī, *good.**Superlative.*tōqaīt éī, *best.*

Strictly speaking there are but two degrees of comparison of the adjective in S'ciatl as given above, but a kind of comparative is formed by using the superlative form with little stress. In other words the degree of excellence or its opposite is expressed rather by the voice than by the term. The longer the expression is drawn out the more superlative it becomes.

Verbs.

The inflection of the verb in S'ciatl is effected as in the other Salish dialects examined by means of affixes and auxiliary verbs. The aorist or indefinite past is formed by prefixing the particle tē. This corresponds to the ē of the Sk'q'omic and Halkōmélem dialects. The regular past is formed by affixing to the verb stem the particle ōtl; the ētl of the other dialects. The future is expressed by the addition of the particle skwa. These are the principal tense signs in S'ciatl.

*Intransitive Verb.**Present Tense.**Singular.*kukelāsēlem-tein, *I am sick.*kukelāsēlem-teūq, *thou art sick.*kukelāsēlem, *he, she, is sick.**Plural.*kukelāsēlem-c't, *we are sick.*kukelāsēlem-teālap, *you are sick.*kukelāsēlem, *they are sick.**Aorist or Indefinite Tense.*

tē-tein-kukelāsēlem.

tē-teūq- "

tē-c't-kukelāsēlem.

tē-teālap- "

The English equivalent of this form is difficult to render. It can only be given by a circumlocution such as, I was and still am sick, etc.

*Past Tense.**Singular.*kukelāsēlem-ōtl-tein, *I have been sick.*" "-teūq, *thou hast been sick.**Plural.*kukelāsēlem-ōtl-c't, *we have been sick.*" "-u-teālap, *you have been sick.**Future Tense.*kukelāsēlem-tein skwa, *I shall be sick.*" "-teūq skwa, *thou wilt be sick.*" skwa, *he will be sick.*kukelāsēlem-c't skwa, *we shall be sick.*" "-teālap skwa, *you will be sick.*" "-teālap skwa, *they will be sick.*

Conditional Forms.

- WE-kukelāsēLEM-EN, *when or if I am sick.*
 „ „ -auq, *when or if thou art sick.*
 „ „ -at, *when or if we are sick.*
 „ „ -ap, *when or if you are sick.*

Dubitative Forms.

- aiqāqōmela WE-kelāsēLEM-EN, *I may or perhaps I may be sick.*
 „ „ „ -auq, *thou mayest or perhaps thou mayest be sick.*
 „ „ „ -at, *we may or perhaps we may be sick.*
 „ „ „ -ap, *you may or perhaps you may be sick.*

Interrogative Forms and Replies.

- kelāsēLEM-ā-teūq ? *are you sick ?* tē-tein-kukelāsēLEM, *or shortly tē-tein, I am.*
 kelāsēLEM-ōtl-ā-teūq ? *have you been sick ?*
 kukelāsēLEM-ōtl-tean, *or shortly ōtl-tean, or tean-ōtl.*

Negative Forms.

- qā-tean kutl kukelāsēLEM-an, *I am not sick.*
 qā-teat „ „ -at, *we are not sick.*
 qā nesqátlas kwens kelāsēLEM, *I don't want to be sick.*

Periphrastic Forms.

- qōtiwón-tein kwens kelāsēLEM, *I think I am going to be sick*
 súkwēwon-tein WE-kelāsēLEM-an, *I am afraid I shall be sick.*

Transitive Verbs, Active Voice.

séPETut, *to strike.*

Present Tense.

- | <i>Singular.</i> | <i>Plural.</i> |
|---------------------------------|-------------------------------|
| SEPET-tean, <i>I strike.</i> | SEPET-teat, <i>we strike.</i> |
| „ -teauq, <i>thou strikest.</i> | „ -teap, <i>you strike.</i> |
| „ -as, <i>he, she, strikes.</i> | „ -asēt, <i>they strike.</i> |

Present Perfect Responsive Tense.

- tē-tein séPET-an, *I am striking.* tē-c't SEPET-at, *we are striking.*

The other persons follow regularly in like manner.

This tense is used in reply to question, "What are you doing?" and it is interesting to note that the auxiliary verb attracts the primary pronoun, while the verb takes the secondary. The same is seen in the following forms:—

Present Continuous Tense.

- tē-tein séP'-nūQ-EN, *I am striking it.*
 tē-teūq séP'-nūQ-auq, *thou art striking it.*
 nētl-tē séPE-nūQ, *he is striking it.*

tē-c't séPE-nūq-at, *we are striking it.*
 tē-teap séPE-nūq-ap, *you are striking it.*
 nētl tē séPE-nūq, *they are striking it.*

Another form of this tense is : pālā-tein sēs'pe-nūq, etc., etc.

Past Continuous Tense.

sēs'pe-nūq-tein, *I was striking it.*
 „ -teūq, *thou wast striking it.*
 „ „ *he was striking it.*
 „ -c't, *we were striking it.*
 „ -ap, *you were striking it.*

Past Perfect Continuous Tense of Remoter Action.

sēs'pe-nūq-ōtl-tein, *I have or had been striking it.*
 „ „ -c't, *we* „ „ „

The other tenses follow regularly in like manner.

Past Perfect Continuous Tense of Recent Action.

sēs'pet-ōtl-tean, *I have been striking it.*
 „ „ -teat, *we* „ „

The other tenses follow regularly in like manner.

Past Tense.

sēpet-ōtl-tean, *I struck, or I have struck.*
 sēpet-ōtl-teat, *we struck, or we have struck.*

The other persons follow regularly in like manner.

Future Tense.

sēpet-tean skwa, *I shall strike.*
 „ -teat skwa, *we shall strike.*

The other persons follow regularly in like manner.

My collections of native texts have not furnished me with any other form of the future than the above. There is no instance, I think, of this tense being formed by the verb "to go" as in other of the Salish dialects.

Imperative Mood.

The imperative inflection in S'ciatl is -la or -ela, thus :—

sēp'tela! *strike!* sēp't-teauq skwa! *strike you!*

The use of the future particle is interesting here.

sēp't-an qēlat, *I will strike, or I am determined to strike.*

Other forms of the imperative are: sēp't! *strike!* this form is employed when speaking to one person alone. When the command is given to several persons the following forms are used: sēpetī! sēpetīla! *strike!*

Obligative Forms.

té-tcin-sepe-nūq-en, *I must strike it.*

*Negative Forms.**Present Tense.*

qá-tcan sep't-an, *I strike not*; qá-tcat sep't-at, *we strike not.*

The other persons follow regularly in like manner.

Past Tense.

q'ótl-tcan sep't-an, *I did not strike*; q'ótl-tcat sep't-at, *we did not strike.*

The other persons follow regularly in like manner.

Future Tense.

qá-tcan-skwa sep't-an, *I shall not strike*; qá-tcat-skwa sep't-at, *we shall not strike.*

Imperative.

qá-tcauq séspet-auq! *don't strike it!*

qá-tcauq sépenōmc-auq, *don't strike me.*

qá-tcat ketl sépet-at, *don't let us strike it.*

qá-la séspeçau, *don't strike me.*

qá-tauq sépe-nūq-auq, *don't you strike it.*

In these negative forms it is interesting to note that the negative attracts the principal pronoun, the verb taking the secondary form. In the fourth sentence the negative takes the imperative inflection, la.

Miscellaneous Forms.

qā-tcan ketl sepe-nūq-an, *I will not strike it.*

k'lōm nētl-ā-wā sepe-nūq-an, *I haven't yet struck it.*

Conditional Forms.

sés'pet'-tcan, *if I strike.*

sés'pet-tcat, *if we strike.*

The other persons follow in like manner.

kwens tē-we-tl sépet', *when I strike or struck it.*

kwōms „ sésepét', *when we „ „*

Optative Forms.

nesqatL kwens sépet', *I wish I could, or I should like, to strike it.*

musqatL kwōms sésepét', *we wish we could, or we should like it.*

Interrogative Forms and Replies.

tā sepetas? *did he strike?* t'ē sepetas, *he struck it.*

tā-teūq-hā-sepet? *did you strike it?* tē-tcin, *I did.*

sepet-ā-c't? *did we strike it?* tē-c't, *we did.*

The interrogative sign is ā or hā, the same as in the Kwántlen.

Iterative Forms.

tē-tcin(E)wa-tl-sés'pet-an, *I am repeatedly striking it.*

tē-c't-wa-tl-sés'pet-at, *we are repeatedly striking it.*

pála sés'petas, *he is striking it all the time.*

ses'pet-auq, *keep on striking*; ses'pet-tcap, *keep on striking (plural).*

Deprecative Form.

tsēqēmēts qā-teauq sés'pet-auq, *please don't strike it.*

Reciprocal Forms.

sépetautl, *we struck each other.*

sāpátela! *strike one another!*

Infinitives.

sépetas, *to strike*; tē-sépetas: *to have struck.*

Participles.

sés'petas, *striking*; sepet', *struck.*

Passive Voice.

sep', *struck.*

Present Perfect of Accidental Action.

tē sepenōmálem, *I am struck*; tē sepetnómōlem, *we are struck.*

Present Perfect of Purposive Action.

tē sepeçálem, *I am struck.*

Past Perfect of Accidental Action.

sep'nómálem-ōtl, *I have been struck.*

tē-tcin-sep', *I have been struck, or I have struck myself.*

Conditional Form.

k's tē sepeçálem, *If I am struck.*

Reflexive Forms.

tē-tcin sépenōmōt, *I strike myself.*

sepenōmōt-ōtl-tcin, *I have struck myself.*

A secondary form of the present perfect is as follows: tē-tcin-sepelt, *I am struck (with a stick)*; tē-c't-sepelt, *we are struck (with a stick).*

Miscellaneous Texts.

I struck you, tētcin sepenómī (in answer to question "did you strike me?").

it is going to rain, kwō-kutL teitl (the particle kwō here marks the absence of the rain).

he struck me, tē sépenōmeas.

it is John's dog, snā tla John teédō or teénō.

we have some horses, stéakaiū teimsnána.
my dog is white, kwesém teén's teédō.
come with me, mēla kumēt mēç.
bring me the horse, méstwela te stéakaiū.
give me the horse, yaçela ā te stéakaiū.
it is cloudy, tē samkwetlelt.
are you hungry? kwakwai-ā-teūq? I am hungry, kwakwai-tean.
are you cold? teitcem-ā-teūq? I am cold, teitcem-tean.
did you shoot a deer? qāa-teūq tōsōt te hōpīt?
it is John, nētl ā te John.
it is Mary, nētl ā tle Māli.
he said I was a bad man, sōsōt mai tein-kwā stōmic.
when you come in shut the door, we-kwutlauq umastūq tek'et te cautl.
I ought to drink, kōkō-tean skwa.
he stole my horse, kwōtcelotl utcen stéakaiū.
he stole your horse, kwōtcelotl utce stéakaiū.
it is raining, tē-wetl-teitcitl.
if it rains I shall not go, we teitetlas qā-tean skwa sō-an.
I live here, nī tean ā tī (in answer to question).
I live there, kwō tein nē ā tā (in answer to question).
I am a Siciatl, cīcatl-tein, or sīcatl-tein.
I am hunting, yīyūloçōt-tein (in answer to question "what are you doing?").
a canoe maker, hai-hai.
a basket maker, hōhopálice (from hōp, "to pierce").
a stone, qaiéls.
is it a stone? qaiéls-ā?
is that the stone? (pointing at object) qaiéls tá-tlōm?
this is the stone, qaiéls té-tlōm.
which stone? kwintea tce qaiéls?
is that a stone? qaiéls-ā tá-tlōm?
what kind of a stone? stam teáq qaiéls?
is that a black stone? kwesém tā-tlōm qaiéls?
one dog, teédō, stéedō, or teénō.
two dogs, teéd-teedō, stéed-teédo (or -nō; n and d are interchangeable).
no dogs, qāk't teédō.
any dogs, te aukq teédam.
many dogs, keq teédam.
some dogs, qā keqas teédam, ad litt., "not a lot of dogs."
few dogs, qéqadēn, or qēqanēd teédam.
right ear, aiyūlbaiēdá or aiyūlmaiēná.
left ear, sékwaiēdá or sékwaiēná.
both ears, kwólkwoladá or -ná.
right eye, aiyūlbalōs or aiyūlmalōs.

- left eye*, sékālōs.
both eyes, kelkelōm.
right hand, aiyúlboiya or -mōiya.
left hand, sēkōiya.
both hands, teiltcālie.
a good dog, ēi stēdō (or -nō).
my back is sore, qus tēn ēlētcin.
your back is bad, mai tē ēlētcin (singular).
his back is bad, mai ēlētcins.
our back is bad, mai tems ēlētcin.
your back is bad, mai ēlētcin-Elap.
this, tī, *this house*, tī tlúmstan.
that, tā, *that house*, tā tlúmstan.
these houses, tī tlátlumstan, *those houses*, tā tlátlumstan.
I want a horse, nesqátlcis stēakaiū.
I am thirsty, kōkamtein.
I want some water, nesqátlcis éwuç.
I want some meat, nesqátlcis slēuk.
I burnt it, kwō-tein kwásaten.
I burnt it all up, kwō-k'átūq.
I burnt my hand, kwásawōiya-tein.
I am burnt, tē-tein k'átūq.
the moon will rise soon, tē cálcāl sōa éna.
he will come soon, qāqōqas kum kwutL éna.
I am hurt, tē-tein ēçau.
that is your horse, ásēna stēakaiū.
I must go soon, sōwatein sō.
can you swim? qōāteūq qākelémauq?
who made this? wat-cī tī nēāt?
I made it, sālīū or sályū tī nēāt.
he has killed my dog, tē kwōyūtas tēn stēdō.
he killed it, tē kwōyūtas (object near) tē cinto (object far off).
once he came to my house, naiteauq kwutL ā tēn tlúmstan.
I will come, kwutL-tean skwa.
often he came to my house, palát kwokwutL ā tēn tlúmstan.
he is laughing, qáqīyam.
he is crying, qáqawōm.
who is that? wat tātłōm.
it is Mary, nētl se Málī. *it is John*, nētl tē John.
give me my hat, méstūq tēn siákōp.
make up the fire! tēfmīakōpla!
will you come with me? kwutL-ā-teūq kwa kumēt tē meç?
it is dark, k'lúkōm. *it is cold*, tōqaiteum.

it is snowing, tēwutl kwókwōmai.
is your father dead? kwa kwōi tce man?
is your mother dead? kwa kwōi kle tan?
are you coming? kwutLateūq kwāhā?
he lives with me, skatlsēt tla sáliyū.
I saw the dog, kwō-tein kwedētēn steédō.
the moon is bright, tē cálcāl steqait kailt'.
this house is good, tē tlumstan ēi.
this is a good house, tlātlēū ēi, or steqwaft ēi, tlumstan.
one tree, palai (sīya).
two trees, témicidai.
a small tree, qōqīai.
a large tree, tfai.
many trees, keqai.
no trees, qāk't sīya.
few trees, qéqanēn sīya.
any tree, aukq sīya.
all trees, aukq sīya.

Prepositional Phrases.

on the beach, ā tē teau.
near the house, stesaft ā tē tlumstan.
in bed, ā tē áqelite.
on a stone, ā tē qaiēls.
in the box, ā tē kwákwa.
in the sky, ā tē tsōk'.
inside the house, ástq ā tē tlumstan.
in the canoe, úlalōtl ā tē snúqōtl. *go in*, sōōtlō.

VOCABULARY.

Corporeal Terms.

<i>head</i> , sk'úkum.	<i>hair of animals</i> , mákēn.
<i>face</i> , meósten.	<i>tooth</i> , yínis.
<i>crown of the head</i> , sálálēuk', kutlkwat.	<i>tongue</i> , téukças.
<i>side of the head</i> , tátafyas.	<i>palate</i> , kwátēmkain.
<i>back of the head</i> , sálnētcēp or sáldētcēp.	<i>gums</i> , tlēakwóldis (or -nis).
<i>forehead</i> , élsēn.	<i>nose</i> , múksēn.
<i>cheek</i> , sálakwóda (or -na).	<i>septum of nose</i> , skwéuk'.
<i>jaw</i> , kwokaíek.	<i>ear</i> , k'woláda (or -na).
<i>skull</i> , skwóthōs or (qōs).	<i>lobe of the ear</i> , slipoíada (or -na).
<i>hair</i> , mákēn.	<i>eye</i> , kélōm.
<i>beard</i> , kwópōçin.	<i>eye-lashes</i> , tléptēn.
<i>hair of the body</i> , skwópeus.	<i>eyebrows</i> , qāçóbēn.

pupil of the eye, kulmīqálwos.
mouth, čōčín.

N.B.—According to my informants there is no distinction between upper and lower lips, no terms existing in Sícíatl for “lips.”

throat, tsáltlas.

neck, tēwéda (or -na).

breast, sélédus (or -nus).

teat, skēm.

milk of the breast, skēm.

back, élētein.

side, kwatámelōm.

loins, wōk'tédete (or -nete).

stomach, qaiyum.

arm, tātúya.

shoulder, sáláqen.

spine, Haiwa.

hand, teálie.

finger, qúlēakwōíya.

finger-nail, kúpaiakwōíyaten.

thumb, klākēakwōíya = eldest finger.

1st finger, klakhōpōíyáli = “the pointer.”

2nd finger, ts'aíbiakwōíya = “the strongest.”

3rd finger, skáfekwiakwōíya = “next strongest.”

little finger, skítēakwōíya = “last one.”

elbow, kwomqulaqen.

thigh, saldētcalép.

leg, sēautcin.

knee, kwōmuq.

foot, yécin.

sole of foot, pēkálcin.

toes, skwaicēakwōícin.

toe-nail, kupaiakwōícten.

bone, cau.

skin, sqōbelete.

heart, s'lekwēdas (or -nas).

blood, skaitl.

lungs, sqúsep.

bowels, kaíaq.

belly, túk-wilas.

spinal-cord, smačáliaken, tem sqaúha.

brain, smačáliaken.

liver, púkpuk.

sinew, tlées.

muscle, tinte.

claw, paw, póqcin.

fat, qus.

rib, lúaq, laúaq.

tail, sópadete (or -nete).

Terms of the Principal Animals known to the Sícíatl.

horse, stéakaiū.

dog, stéedō (or -nō).

bear (black), stcítūon.

„ (*grisly*), maiykq.

deer, hōpīt.

elk, kaíete.

wolf, wōkwedátem.

beaver, skémetl.

mountain-goat, sqaitlai.

raccoon, mēlalūs.

lynx, móliq.

wild-cat, wáláksia.

mountain-lion, skúk-wākām.

otter, sk'áatl.

rabbit, sōspīt.

weasel, pipkatltcaíac.

skunk, spálas.

bat, pácpácebak.

chip-monk, qaiépétein.

squirrel, skwōíya.

crane, pákwaiyus.

hawk, kakakawénūq.

fish-hawk, tséúqtséūq.

woodpecker, sláluk^a.

„ tétlate.

rat, skwākóbin.

mouse, kwátEn.
flea, matcōsÉla.
louse, métcin.
goose (black), qa.
 " (white), klákwanun.
duck (mallard), ténuks.
loon, skákaiēm.
owl, skaiakEnēk'.
eagle, k'aikq.
jay (blue), skáckac.
robin, skwéctuk't.
kingfisher, kwákwolē.
pigeon, hámō.
humming-bird, stōstōs.
swan, hōken.
martin, spéelōs.
wren, stémtēm.
snake, ótlkai.
toad, wiqelqáliaq.
frog, hóham.
lizard, séskwatl.
ant, ábāqiyū.
worm, sēskq.
wasp, māmālawéōstunq.
housefly, qáqaiyō.
crow, skékak'.
grouse, hōmhōm.
salmon (generic), steálisten.
 " (spring), yómute.
 " (cobia), kwōmaieça.
 " (dog), séanūq.
 " (steel-head), skaiunq.
 " (sock eye), súkai.
 " (humpback), hánōn.

trout, skaikōwiq.
cod (rock), tsúckhō.
 " (red), tōktōk.
 " (tom), saukcelēunq.
star-fish, kwéitlein.
cockle, s'tlélōm.
sea-eggs, ámtēn.
whale, kwénīs.
halibut, petáleda (or -na) etátqa.
swallow, spéunq.
bee, māmālwé.
butterfly, kélāla.
grasshopper, kaiek'wátqum.
spider, mákwēça.
mosquito, setcōs.
gull, kwákwī.
raven, skwátō, kwétō.
porpoise, kwódōt' (or -nōt').
sturgeon, skwáwite.
oolican ("candle-fish"), swéawā.
flounder, qélaqEn.
herring, sláwat'.
smelts, steákūm.
oyster, klúqklunq.
mussel, tlaauakum.
crab, qaíek'.
eel, sábaçbem or sūmaçmem.
dog-fish, k'wáete.
clam (generic), s'óçkō.
 " (large kind), smeçaí.
 " (medium size), sk'aíi.
 " (small kind), skweçaí.
seal, ásq.

Terms of Consanguinity and Affinity.

daughter } mēna { nē mēna, *my son*. When addressed by parents, called tēt =
 "lad."
son } tlen mēna, *my daughter*. When addressed by parents, called
 tlē = "lass."

family, offspring, túfiqel or túikwel.

mother, tan, when spoken of. When addressed by children, ta.

father, mán, " " " " " " mā.

- grandfather* } *séla*. When addressed by grandchildren they are called, *yáha*.
grandmother }
great-grandfather } *tcámēuk*. When spoken of collectively the suffix *-ten* is
great-grandmother } added, thus: *tcámēukten*.
great-great-grandfather } *haúqēyuk*. This term also takes the collective suffix
great-great-grandmother } *-ten*.
great-great-great-grandfather } *tsúpīyuk*. Add suffix *-ten* for collective form.
great-great-great-grandmother }
great-great-great-great-grandfather } *tópīyuk* (add *-ten*) as above.
great-great-great-great-grandmother }
grand-son } *émac* or *émats*.
grand-daughter }
grand-parents, *séla-tēn* (coll.); *grand-children*, *ématstēn* (coll.).
mother's brother } *tcāp'ts*. *mother's sister* } *tcāp'ts*.
father's brother } *father's sister* }
eldest brother } *youngest brother* }
eldest sister } *teētē*. *youngest sister* } *skaiēq*.
eldest cousin } *youngest cousin* }

The suffix *-ten* may be added to all these terms

- elder of two brothers or sisters*, *tlēwēt*.
younger of two brothers or sisters, *kūtī*.
youngest of many brothers and sisters, *kéektī*.
sister (by courtesy), *ális*.
brother's } *child*, *séliuh*; *nephews and nieces*, *séliuhtēn* (coll.).
sister's }

If the immediate relative be dead *otl* must be added; thus, *séliuh-ōtl*. This term is always employed when speaking of the dead, the ancients or the ancient time. It is probably the same particle as marks the "past" tense of verbs.
eldest child, *tlēwēt*, *teintl*, *teēteintl*.
second child, *kūtī*.

All others termed collectively, *kekáktē*.

last or youngest child, *kéektatl*.

- father-in-law* } *swénēm*. *son-in-law* } *tcūwétac*.
mother-in-law } *step-father*, *mā-nālaicin*. *daughter-in-law* } *step-son* } *mēn'élqitq*.
step-mother, *tā-nālaicin*. *step-daughter* }
father's brother's } *wife*, *tā-nālaicin*. *father's sister's* } *husband*, *mā-nālaicin*.
mother's brother's } *mother's sister's* }
wife's } *brothers, sisters, cousins*, *nēqteūmaic-tēn* (coll.).
husband's }
wife's } *relations (taken collectively)*, *nēqwénēm-tēn*.
husband's }

General Glossary of the Common Words in Siciatl.

- able, etcalém.
I am able, etcalém-tein.
 above, kúatam.
 afternoon, yelaú tekúkq.
 again, tlal.
 aid, help, kwinámq.
I will help you, kwinamçsētein skwa.
 air, breath, späls.
 alder-tree (*alnus rubra*), qeqeqsai.
 all, aukq.
 always, pälát.
he is always hunting, tē pälát teāteāte tlem.
 ancients, people of long ago, tōmōsōtl.
 and, éē, ita.
 anger, to, taiyākemítem.
 angry, taiyek.
 animal (*generic*), tītateulmīūq.
 answer, reply, kwäl.
 anybody, au-wät.
 arise, get up, kwōéc, kwaíéc.
 arise, spring up (*as a storm*), tēlate.
 arrow, haiyaiten.
 arrive at, or come to, tēmtlält, tesmēt.
 ashamed, tlañil or sañil.
 ashes (*hot*), kwās, kwailéçap.
 ashes (*cold*), teñbem or teñmem.
 ask, to, wálut.
I will ask him, wálut-tein-skwa.
 back (*to come or return back*), yéleñ.
he went back, tē sō yéleñ.
 bad, mai.
 bail, to, stlókotsot.
let him bail, nétlwela stlókotsot.
 bailer (*instrument*), tlókómin.
 bait, skwía.
 bake, kwolác.
 bark, to, wōwóm.
 bark (*of tree*), p'elán.
 basket (*used principally for berries*), spíteñ.
 basket (*used principally for clothes*), káteñ.
 basket (*used principally for roots, etc.*), láqai.
 bay, açelete.
 beach, teau.
on the beach, ā te teau.
let us go down to the beach, wē sō ā te teau.
 beat, to (*with stick*), supetet.
 beat, to (*with the hands*), supetet ā te teálic.
 beat, to (*with a stone*), suk'et ā te qaiels.
 beautiful, aiyúbic.
 bed, láas or látl.
 befool, to (*anyone*), kāk'Elnahtas.
 become or get angry, tītaiyak.
 below, down, ukqēi, qutluk', tlup.
 below (*under*), klēpedéte or klēpenéte.
 belt, kait.
 bench, chair, sukwenáteten.
 bend, to, t'óyūet, humkwēt.
I bent it, té-tein-humkwáten.
you bent it, nūwil-tē-humkwet.
 be quick (*to*), káiyē.
 berry (*generic*), skwolóba or skwolóma.
 bid, command, to, ótlōtem.
 big, large, immense, tī.
 billow, wave, yūlak.
 bird (*generic*), skwēakwelkwálac.
 bite, to, qutlt'.
 black, kwōsēm.
 blackberry, swōkwatl.
 blanket (*Hudson's Bay*), pek' kwōkw't (*white*).
 blanket (*Hudson's Bay*), kwum mōk't (*red*).
 blind, t'ápōs.
 blister (*a*), spóya.
 blister, to, póya.
my hand is blistered, té-tein-póya.

blood, skwētl.
blow, to, pōt.
blow it! pot-teuq, ad. litt., *blow-you*.
blunt, maínis.
boil (on the body), sében.
boil, to, kwólstan.
the pot is boiling, mätlōkwóm tē kwólstan.
the water is boiling, tāwutl māsuk tē séwotl.
bone, cau.
borer (instrument), kwēsébim or kwēsémim.
I bore, kwēsē-tein.
both, s'kásait.
we will both go, s'kásait kwums sō.
let them both go, sōs twelat.
bottle (of glass), lamáli.
bottle (kelp bulb), péalteis.
bottle (fish sound), kwop't tē lauf.
bottom, qúsuk, tluq.
bow, stluk or sluk.
box, kwákwa.
boy (small), stōtōtemie méman.
boy (youth), swáwolōs.
branch, sáliya.
break, to, qutst.
 " " (*into pieces*), qwatsau.
bridge, haicin.
bright, dazzling, kwíyím.
bring, to, kwutstuq.
I will bring it, kwutstuq-tean skwa.
broad, wide, pēk.
brush (a), pēqulhēten.
bundle, kētálēte.
bush (small), sáliya.
 " (*large*), saldatsíya or salnatsíya.
by, on, nī.
carry, to, yāc't.
catch, kwídat or kwínat.
cane, stúkēn.
cedar-tree (thuya gigantea), túqemai.
change, transform, tūq or tōq.

chew, tsaám.
chief, hēwus.
chiefs, hāwēwus.
chief (war), skaíeq.
child, méman.
children, muméman.
chip, klumén.
chipmonk, sqaikpétein.
choke, to, pētsklált.
chop, to, k'lemúm.
chop or fell a tree, hētsnate.
clamber, to, teélsōt.
cloud, sámuksl.
coffin-box, núákwa, qek'um.
cold, teim.
comb, ēkōsem.
come, to, amé, mē.
come, arrive to, kwutl.
command, bid, qáet.
completed, finished, hóis.
continue, repeat, tlálet.
cook, to, k'wel.
corpse, smaúkwa.
country, land, swíya.
crabapple-tree, kwehópai.
crooked, bent, skwósēt.
cross-eyed, qéqisōi.
cry, to, qauém.
cry out with pain, skwinēt.
cut, to, sitewât, tēet.
cut into pieces, kwōqt.
daily, auksélt.
dance, to, kwaiyélic.
dancer, a, skwaiakwaiyélic.
dangle, to, sáliakaim.
damp, kelkel.
dark, tlúk'wom.
dawn, kwíakwī.
day, k'elt.
dead, k'oi.
declare, say, to, qóqōt or sósōt.
deep, k'lip.
deer, ópīt or hópīt.

deer-hide, tlánauk.
desire, wish, to, sqats or qatl.
die to, kwóí.
dig, to, kwénat.
dirty, wíyam.
disbelieve, qōqwaiaqátem.
discuss, to, sōtíwán.
dish, kwäst.
dislike, hate, to, mais.
I dislike you, mais-tómi-tein.
distress, to, qetlil.
dive, to, nekúm.
diver, a, snúkenukum.
do, perform, to, stēqūas.
done, finished, hóis.
door, túkten.
down (of birds), stónate.
dream, to, utétōt.
dream, a, sutétōt.
drip, to, sātēq.
drop or fall, to (of person), pelpélem.
 " " *(of thing)*, pélem.
drown, to, mel.
he will be drowned, melas skwa.
dwelling-place, home, úlawēm.
drum, menátsi.
dust, dirt, swíya.
earth, land, swíya.
earthquake, súkwōm te swíya.
eat, to, étlten.
evening, nánat.
everything, tet-aukq-stam.
European or white man, qaléten.
examine, to, kwetét.
exceedingly, very, stoqwét.
extraordinary, patlpesét or patlpetlét.
far, teūk.
fat, qōs.
feast, to, tlaácin.
feather, cimel.
feel, to, támat.
fight, to, qaílēq.
file, a, yúkamin.

I file, yēyekamatein.
file, to, yēyekama.
fill, to, liteac.
fill it ! liteacEla !
find, to, sókten.
I found it, tē-tein-sókten.
finish, complete, to, hóit.
finished, done, hóis.
fire, teitéim.
fire-drill, skwétsakōp.
fire-place, teitéim-máli.
fire-wood, skwaíuk.
fir, peládaí or pelánai.
fish, s'tcálēten.
fisher, a, s'tealcálēten.
fish-bone, Haiíwa.
flame, wátuk.
flesh, sléuk.
float, to, petléc.
flood, pēuq.
flower, skwásam.
fog, tsemsauikwolam.
food, sétlten.
foretell or prophecy, to, teqwoneqōs.
friend, siaíya.
freeze, to, teimtciman.
fresh, sweet, haus.
gamble, to, kwák-kwelt.
get into (canoe, etc.), ólōtl, ólōç, ólōs.
ghost, syqáū.
girl, tlitladai or tlitlánai.
girls, tlitlintlánai.
give, to, yat.
give it ! yatela !
glad, merry, kwíck-wic, kwáckwic.
glove, tlókwatē.
go, to, sō.
good, beautiful, fine, éi.
gooseberry, stámōq.
grass, skwósits.
graveyard, smukemúkwa.
great, steqwét ti.
greedy, skúduh or skúnuh.

green, klusém.
grind, sharpen, to, téekenis.
groan, to, ānēhét.
grow, to (of things), pepápā.
 " (of man), tlótlótl.
group (of people), nōkwálmīūq.
guide, to, säyūsels.
 " a, säsäyūsels or nuks-säyūsels.
gun, pitch, kwelétl or kwelēq.
hail, tselócin.
it's hailing, tsetselócin.
handsome, pretty, saiyúbic, aiyúbic.
hang down, depend, pélem.
hard, k'luk'.
hark, hear, to, kánam.
hat, siyákōp.
hats, sīsīyákōp.
hate, dislike, to, mais.
heal, cure, to, laqmá.
heaven or skyland, kwátem.
help, to, kwīnamēn.
help him ! kwīnamet-teūq.
he, him, tē té-tloms.
hemlock-tree, kwílai.
hicough, to, hámēk'.
 " a, cāmēk'.
hide, to (person), kwálēmōt.
 " (things), kwálic.
hiding-place, kwáltēn.
hill, skūmēt.
him, tē tenitl.
his, sna (when person present).
 " snas (when person absent).
hold, to, klálát.
hold it ! klálátēla !
hole, slēpēōq.
hook, to, kōiyōk.
home, améwit, yōa, yū, amēut, úlawēm.
home-sick, yíám.
hop, jump, to, wētēm.
horn, wudaú or wunaú.
hot, kwās.
house, tlúmstan, úlawēm.

houses, tlátlumstan.
house (small), tlétlumstan.
hunger, skwái, skwōi.
hungry, kwākái.
hunt, to (large game), teátlem, teátetlem.
 " (small game), hailéek.
hurry, to, tsátsaiyeq.
husband, skwākuts.
I, me, tē sālyū or sālyū.
ice, spēū.
island, kwétsa.
Indian, skálmīūq, kálmīūq.
infant, skákelatl.
inspect, examine, to, kwetét.
inside (of house), ástūq.
instructions, sqūnál.
interpret, to, kwékwētlken.
interpreter, nūks-kwékwētlken.
is, are, nētl.
itch, teiēm.
invite, to, ōt or óet.
jump, to, qétem.
keep, to, nēstq.
kettle, kwelistén.
kind, good, éi.
knife (small), tlátl'teten.
 " (large), tláteten.
 " (pocket), qéōqs'.
knock, to (at a door), sukacaút.
knock or strike, to, súkut.
know, to (intuitively), teqwánōm.
 " teqnēq.
ladder, tek-esót-tēn.
lake, silátl.
lame, sqótsenatc.
land, swíya (when spoken of on the
 water it is called tlalt).
language, kwáltēn.
large, big, tī.
laugh, to, qaiēm.
laughing, qāqīēm.
lazy, óomat.
lazy person, sóomat.

leak, to, kúkelem.

leaf, sália.

lean, sléakēt.

leap (as a salmon in water), mák'eni.

learning, instruction, sténcam.

learned, stútēnc.

leather, citetcai.

leave, go, tsō or sō; sōla! go! sō-tein.

I am going.

lend, to, kwébilis or kwémilis.

lie, éwon, qeqéwon.

lice, metcín.

lick, to, tsémēt.

lie, to, qaiagēwonem.

lie dead, to, skóiyēt.

lie down, to, s'agaic.

life, swáyi.

lift up, to, tcēt.

light (opp. heavy), qíeqā.

„ (opp. dark), k'ēlt or k'áilt.

„ (of moon), cálit.

„ (of torch), kwéyēm.

lightning, pāpeléeq.

like as, similar to, swēnām.

line, qélem or qailēm.

little, tsótsī.

live, to, nī.

I live, nī-tean.

liver, pōkpok.

log (in the forest), síya.

„ (in the water), kwétlai.

logs (in the forest), síyam.

„ *jam of*, petsēt.

lonely, salsiluk.

long, klāk't.

look at, investigate, to, kwetas.

„ *for, search, to*, sélēt.

lose, to, qaqaú.

loose, kafakaiya.

loud, témēsōt.

love, to, sqat.

lover, swátela.

he is my lover, nētl ne-swátela.

lump, skunéq.

lungs, tlákwamáli.

man, stómic.

many, keq.

maid, swáwelōs tlánai.

maple, k'úmōlai.

marrow, nipein.

make, to, neát.

„ *a fire*, teimīekwōp.

make whole, restore, to, tluk'wamát.

marry, to, swākác.

married woman, swākáts.

„ *man*, síyaktseú.

mark, to, húlem.

mask, sqoioqai.

mat (for beds), klíwai.

„ (for food), sclósēten.

me, sályū.

meat, sléukq.

medicine, stélmēu.

meet, to, aiakwōst.

melt, to, yauq.

men, stémtōmic.

mend, to, lāsmát.

message, siwam or sqam.

midnight, nicie.

mind, kwálēwon.

mid-day, kaúkūu.

mine, tsena.

mistake, nátcin.

mix, to, nēlit.

mock, to, tatāmekén.

moccasin, stlúkeín.

moon, cálcál.

morning, kwékwí.

morning-star, kwékwí-kwōsen.

mountain, smánēt, skwétlai.

morsel, bit, tūyēt.

move, to, yūalōm.

„ *it!* yūalōtela!

„ *to (from place to place)*, yūalósot.

much, many, keq.

mud, tsētsēek.

murder, to, kwōyiluk.
murderer, kwōkwōyfluk, kwōkwaiyiluk,
 kwōkwaīmaç. (The last two terms
 are employed when more than one
 person has been murdered.)
naked, sleuwētsa.
name, skwīc.
narrow, tsēate.
near, stesēt, tetsēt.
needle, k'ēnaiyū.
night, nāt.
no, qā.
noise, qālōkōm.
none, qāuk't'.
noon, kaūkūh.
not, qāuk't'.
now, teitūā, teat.
nut, kupaūtl.
of or belonging to, tle.
offer, to, yātōyāt.
offer it! yātōyatela!
oil, sqes.
old, k'lākatl, stōtēlemit.
old man or woman, qāmēmanes.
on, by, nī or nē.
orphan, wānwānēm.
outside (of a thing), āstlkām.
 „ (of a house), āstlk'.
out, tluk.
owe, to, skwēmelas.
pack, to, yactēm.
 „ a, siyacin.
paddle, sk'ūmōl.
pail, tlōkōmin.
pain, swoēt.
paint, yūtleēmēm.
 „ to, yōyōtl.
parents, klāqklāq.
pass, to, yīlau.
path, trail, cautl.
paw, spākin.
peel or skin, to (roots, etc.), stlōpiyōst.
 „ to (bark from tree), slukwēyūst.

peep, to (through a hole), teilakwālōsem.
 „ (from behind tree, etc.), wēlem.
people, te skālaumiūq.
perhaps, ēiqāwōmēla.
pipe, patlum-māli = "smoke-place."
pipe-clay, stūauk'.
pitch, gum, kwūlētl.
pierce, to, hōp.
place or put in water, to, puksāt.
play, to, kaksēm.
he's playing, kākāausēm.
plate, kwākwetlt (dim. of kwātlt, dish).
point (of thing), ēiyalín.
 „ saliyuk.
 „ at, to, hōpēm.
 „ it out! hōpet.
poison, tsuqten = "rattlesnake."
poor, needy, séqēm, naūdō.
portrait, skēlōs.
potlatch, klēénuk.
power (physical), saiyim.
prepare, make ready (food), neūntēm.
presently, in a little while, qāqōqes.
prick, to, súkqōm.
push, to, yōtsem.
 „ it, yōtsōt.
put, to, kwāts.
put in the mouth (as a bit), yātkāit.
put in the fire to cook, hēwēt.
put in the mouth, skōmōts.
quarrel, to, kwālmētaūtl.
quiet, calm, tsōsōm.
race, yētl.
rain, to, teitl.
rain-storm, steitl or cteitl.
rainbow, sātcī.
raspberry (black), sk'ōma.
 „ ("red-cap"), saīūq.
 „ (salmon-berry), k'wēek'wel.
raw, qēts.
ready, hōiya.
red, kwēmēm.
red-paint, temtl.

red-hot, qaihōls.
reflection (in water), māmakīō.
regard, to, neētēm.
remember, to, hākwāt.
reply, to, kwāl.
repeat, continue, to, tlālet.
rest, to, kwāneusem.
restore, make whole, to, tluk'wamāt.
return, yilicin.
rich, wealthy, hēwes.
ring, stelēte = "round thing."
 " (for finger), tsōwātēkwōiya.
ripe, kwel.
river, stōlō.
rivulet, stēltōlō.
roast, to, kwelac.
roast it! kwelacila!
 " to, the hands or paws,
 tepenatcōiyem.
roast, to make them drip oil,
 tepenatcōiyem.
rob, to, teilōtl.
robber, steiltēilōtl.
roof, élatq.
root, kweūminate.
rope, qēlem.
rotten, tluk'k.
round, pelék', pēluk.
rub, to, tsukwum.
rub it! tsuktīla.
run, to, yitl.
sail, to, pōtēn.
 " a, pōtēn.
salt, klātłum, kwōtlōm. (The latter is
 older term.)
salt-water, kwōtkwō.
salty, kwōtōm.
same as, similar to, sukwēman.
sand, kwēlakwēl.
sap, sqāmets.
say, to, kwāl.
save, to (by clutching at something),
 tlalsām.

scald, to, kwāsau.
 " it! kwāsāwut.
scar, sk'aiyētl.
scold, to, qēwit, kaiyēstq.
scrape, to, sáqūm.
scratch, to, kaik'wem.
scream, to, kwāk'ēt.
search, to, tsétsēlem, sēlēt.
sea, sēnkō, kōtlkō.
see, to, kwenēm, sōqtēm.
sell, to, waiēc.
send, to, āmakac.
serve, winākwes.
sew, to, pāts.
 " it! pātsut.
she is sewing, pāpātsem.
shadow, stātsīmēn.
shake, to, yēkwēt.
shake it! yēkwētēla!
shallow, élt.
shame, tlaillātsus.
shaman, ōōlanek.
sharp (of tools, etc.), ēi nis.
sharpen, to, tēkenist.
she, sē, sē-tlōm, tlā, tlā-tlōm.
shine, to, ēiyālōs.
shoot, to, tōtsem, tōtsōt.
short, k'aiak'q.
shout, to, k'ait.
show, to, yōtsōt, saiūst.
show, appear, to, éna.
shrink, to, qēsēçōt.
shut, to, tuk't.
shut the door, tuk't te cautl.
sick, kukelāsēlem.
sight, maiyil.
silent, tōsōs.
sing, to, tēlēm.
singing, tētēlem.
singer, stēltēl.
sink, to, mel.
sit down, to, t'k'éc, tek'aic.
sit, to, t'kénatc.

sky, tsók.
slap, to, tlúk'et.
slave, skíōts.
slide, to, qēqém, qaiEqaim.
sleep, to, étōt.
sleepy, étōtam.
slip, to, sitlk'cin.
slow, ôyōm.
smart, quick, kléklē.
walk quickly, klécin.
smell, to, hákwōm.
smother, to, kupōsēt.
smile, to, pétcēmōs.
smoke (from pipe, etc.), pátlem.
 " (from fire), kwitlēm.
sneeze, to, hásem.
sneeze, a, cásēm.
snore, to, qōkwēt.
snow, skwōmai.
snow, to, kwōkwōmai.
snow-shoe, nūkwēlein.
soak, to, slúk'um.
sock, kwéltēn.
soft (to touch), kéakē.
sold, qaiē.
solid, tuk' tūkēwon.
someone, watásiye.
some, skwuk.
song, stélem.
soon, klē.
soot, kwaiētcūp.
soothe, to, tcēyit.
sore, qus.
soup, skwōkwatlkō, stékēla.
sour, tōtsōm.
sparks, pétcēm.
spawn (salmon), kúleq.
speak, to, kwāl.
spine, haúwa.
spit, to, tlōkt'.
spit ! tlokt'ēla !
 out to, pektas.
splash, to, kwéçil.

splinter, skwukēt, skwékwukēt (diminutive).
split, to, kwuk'ut.
spoon, tcáwai.
spring (of year), tēm, paíya.
 " (of water), málōm.
spruce-tree, tcétlpai.
squeeze, to, pétsēt.
squint, to, múlak'elōs.
stab, to, tlúkēm.
stale, kwutlum = stinking, bad.
stand, to, kwiécē.
standing, kwiécit.
star, kwōsen.
starve, to, kwaikwaiim.
stay, to, skwinēs.
steal, to, tcilōtl.
steam, pōhwēim.
steps, ladder, haicin.
stew, s'pinicān.
stick, to, tlúkōm.
still, yet, tlal.
stink, to, kwetlēm.
stink, bad odour, skwetlēm.
stone, qaiēls, diminutive qaiqaiēls.
stony, qaiqaiēlsam.
stop, to, kaiyē.
stoop, to, kutsēc.
story, myth, sqáqiam (if thought to record an actual or historic event then called wonaúq).
straight, tōk'tōk'.
strap, k'ēt = "belt."
 " (for basket), k'átla.
strawberry, télēuk.
stream, stōtēlō (diminutive of river).
stretch, to, tsúk'et.
strike, to, sépetas.
stripe, shélēt.
strong, ēiyēm.
stumble, to, tēntēnim, tlatekwōicin (=to catch the foot in something).
stump, ts'úk'enatē.

- stutter, to*, átcetc.
stutterer, nüks-átcetc.
suck, tókôm, tókôt.
sucker, a, nüks-tókôm.
summer, tem éyôs.
sun, siaiyök.
sunbeam, swéil, yicinálitsq.
sunshine, swélét.
sunrise, wēwéléō, cēna te siaiyök =
 "appearing the sun."
sunset, áum te siaiyök.
sure, wenaúh.
surprise, to, teilem.
swallow, to, mōkwem.
sweat, to, yākwum.
sweating, yāyakwum.
swell, to, tlāk.
sweep, to, ékwumēūh.
sweet, k'utl.
swift, k'ék'ē.
swim, to, qáqelēm, nesím.
swimming, qáqāqelēm.
swing, to, móimóisum, móimóisôt.
tail, sópenate.
take, kwínat.
take home, to, améwit-enōm.
take up in the arms, élemt.
tale, qáqiam or sqáqiam.
tall, klāk't.
tame, kwákwál.
taste, to, téát.
teach, to, téyūcam.
tear, to, puqt.
tearing, púqtpuqtem.
tear (lacrima), kelōs.
tell, to, táaut, táqom.
telling, tátaqom.
tent, sílaúto.
testicles, méteim.
that, tā, te nē ā tā.
thaw, to, yaíyauk.
the, te (masc.), tle (fem.).
there, éna, tas, ta nē ā tā.
they, tátetlōm.
thick, petlt.
thief, teiltelótl.
thin, pépel.
think, to, sôtēwon, kwálēwon.
thirsty, kōkwām.
this, tī.
thou, thee, te nūwíl, nūwíl.
throw, cast, to, suk'um.
throw away, to, nemác, nemácac.
thunder, qātkém.
thy, thine, áseña.
tickle, to, kekaíyūsak.
tie, to (a knot), k'ésst.
tiny, small, sógi.
tired, weary, k'óeyūs.
to-day, te kwáil or kwéil.
to-morrow, útlkwías.
tooth, yinis.
tooth-ache, qus te yinis, *ad litt.* sore the tooth.
touch, to, kaíisat.
 „ (one on the shoulder),
 qāmālaúteistem.
track, yicinamin.
trail, cautl.
transform, aiyúwatem.
trap, núcin.
 „ (pitfall), hápéuk.
 „ (log), pákawōs.
 „ (spring), cátkōs.
travel, to, yōilōsôt.
tree, síya.
trees, síyam (more literally "forest," place of trees; cf. hópít, deer, hópítam = place where deer abound).
tremble, to, sekwim.
try, to, téát.
tumble, pōks.
tunnel, slipéūh.
turn, to (back), yilicín.
 „ (round), yilkláttem.
 „ (face down), mélōs.



TYPES OF SÍCIATL INDIANS.
THE ETHNOLOGY OF THE SÍCIATL.

twilight, ʒósōs.
twist, seltcāt, selētc.
ugly, māyóbic.
uncover, to, penóot.
under, klépam.
understand, to, tuqenéuq.
unfasten, to, k'ōsem, k'ētatiēt, yuk't.
valley, smétukq.
very, steqwét.
village, tlēlnōp.
visit, to, skwinēs.
voice, sāsūmin.
vomit, yōyōkwot.
wait, to, kaiyé, tluk'āts.
waiting, tlūk'am.
wake, to, yāwum.
 wake him up! yawatela!
 wake up! kutōsem!
walk, to, émac, éméwac.
wall, k'ulkōten.
war, qélēeq.
warm, kwās.
warrior, cemān.
wart, skōkōpīa.
wash, to, tsōht'.
 wash yourself! tsuhtsōhtela!
wash away (by torrent), téseluq.
watch, to, léeluk.
water, séwōtl.
wave (billion), yólauk.
we, nēmōtl, tlnēmōtl.
weak, mīmāyēt, kelkelmōt.
weary, k'wōiyūs.
wedge, hōēt.
weep, qauēm, hāwōm.
weir, tukōs.
when, kwes.
where, kwēntca.
which? niteā?
whisper, to, tlākam.
whispering, tlātākam.

whistle, to, hōpōm.
whistling, hōhōpōm.
white, pek.
white paint, skwōq.
who, wat.
whose, tūwat.
why, wherefore, stealim.
widow, siyāten.
widower, siyāten.
wide (broad), pek'.
wife, siyākēū or siyākēau.
win, to, k'lukwēluk.
wind, spāls.
window, kwēkwīnōsten (modern term).
 " kwāwōs (old term).
wing, címal.
wink, to, saikwōsem.
winter, tem steim, or tem sōtētc.
wipe, to, tsuk't.
wise, klākēwon.
wish, desire, to, sqats.
witch, teinteēnem, kwenēwesals.
with, k'ātsēt (= together), skūmēt.
 I'll go with you, sōteim skūmēt.
woman, slānai or tlānai.
women, tleslānai, tletlānai, tlentlānai.
wood, skwaieq.
woods (forest), qēteim.
wool, k'wāsten.
wrench or dig out, wālat.
yawn, hāhéū.
year, silāmīn, skwōmai (= snow).
yell, to, kwāk'ut.
yellow, k'lesēm.
yes, éa, ō.
yesterday, teilākatlōtl.
you, nūwilap, nūelap.
young, méman.
youth, wāwēlōs or swāwēlōs.
youths, wāwēwēlōs swāwēwēlōs.

THE SOMATOLOGY OF EIGHT HUNDRED BOYS IN TRAINING FOR THE ROYAL NAVY.

BY JOHN BEDDOE, M.D., F.R.S.

IN 1899 and 1900 I was able, by the kind permission of Captain Shortland of H.M.S. *Lion*, and the permission and active assistance of Commander Tothill, then lieutenant commanding the *Nautilus*, to obtain colour-observations of eight hundred lads in training for the Royal Navy, and head-measurements of two hundred of the same. The lads were reported to be almost all between 16 and 17 years of age; some might be a little above or a little below these limits; but I believe it will be safe to treat them *en masse* as of just that age. By far the greater part of them are natives of London or of other large towns in the south of England; but the conditions of admission, as respects girth of chest, stature, soundness and vigour of health and of the senses, and satisfactory intelligence and moral character, are such as to insure a standard distinctly higher than that of the classes from which they spring. I was desirous of ascertaining whether this kind of selection would involve any corresponding preference of particular colours or head-forms—for example, whether any undue proportion of red-haired or long-headed boys would be excluded by the examination. It is true there would remain one source of fallacy which I could not exclude; for it is possible that boys of particular types of constitution, indicated by particular types of complexion and head-form, might be more disposed than others to adopt a sea life, and therefore to volunteer for the Royal Navy. This complication, however, could be avoided only by examining the rejected, a thing practically impossible for me.

There may exist published series of measurements of British boys of about the age of 16; but if so, I am not acquainted with them. The only ones I do know are, curiously enough, the work of a distinguished French anthropologist, M. Muffang; they were gotten in Liverpool, and published in *L'Anthropologie* for 1899. Liverpool was well chosen as being about the central point of the British Isles; but its population, for that very reason, must differ very much from that of southern and central England, from which, and especially from the large towns, my material was drawn.

It occurred to me, however, that the reformatories and industrial schools of my own neighbourhood might supply me with material for comparison; and the governors and masters of these institutions readily lent their aid. The schools

TABLE I.—*Average Head-measurements.*

	Age.	No.	Length.	Breadth.	Index.
Naval Boys	16	200	185·85	144·74	77·88
Kingswood Reformatory	16	46	182·45	141·15	77·36
Warminster „	16	10	181·5	143	78·85
Total	16	56	182·3	141·5	77·6
Kingswood Reformatory	17	22	182·27	141·82	77·80
Warminster „	17	8	184·87	144·87	78·35
Total	17	30	182·96	142·63	77·95
Liverpool Institute Middle cl. } (Muffang)	16	55	189·8	149·7	78·87
	17	19	188·8	149·4	79·13
Ditto, upper middle cl.	17	20	189·9	149·4	78·63
Naval Boys, London-born	16	28	185·16	142·8	77·15

TABLE II.—*Scale of Cephalic Indices.*

	Naval Boys.	Kings- wood.	War- minster.	Clifton Industrial.	Total 3 Schools.	Bristol (included in Kingswood).	Liverpool Primary (Muffang).
69	1	—	—	—	—	—	—
70	—	1	1	—	2	—	—
71	—	2	—	—	2	1	—
72	2	1	—	2	3	—	1
73	8	3	1	3	7	1	1
74	19	7	14	1	22	6	7
75	23	8	10	8	26	6	14
76	15	9	8	6	23	7	14
77	29	13	3	10	26	8	13
78	35	7	5	4	16	4	11
79	28	9	7	3	19	5	14
80	17	2	9	2	13	1	8
81	10	5	3	3	11	3	7
82	5	5	1	—	6	2	4
83	3	1	3	1	5	1	1
84	3	—	—	—	—	—	3
85	1	—	—	—	—	—	2
86	1	—	—	—	—	—	—
Total.	200	73	65	43	181	45	100

TABLE III.—*Naval Boys, Detailed Head-Measurements.*

	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	
134	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
135	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
136	—	—	—	—	—	1	—	—	1	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
137	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
138	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	5
139	—	—	—	—	—	—	—	1	—	—	—	—	—	3	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
140	—	—	—	1	—	—	—	—	2	2	1	1	—	—	2	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	14
141	—	—	—	—	—	—	—	—	1	2	—	1	1	2	2	2	—	—	1	1	—	—	—	—	—	—	—	—	—	—	13
142	—	—	—	—	—	—	1	—	2	2	2	1	—	1	1	1	1	—	—	—	—	1	—	—	—	—	—	—	—	—	14
143	—	—	—	—	—	—	—	1	1	—	2	3	—	—	1	—	—	—	—	2	3	—	1	—	—	—	—	—	—	—	15
144	—	—	1	1	—	1	—	1	1	2	2	2	—	2	2	—	1	—	—	2	1	1	2	—	—	—	—	1	—	—	24
145	—	—	—	—	—	—	—	—	—	—	—	—	—	4	1	1	2	1	—	3	1	—	—	—	—	—	—	—	—	—	15
146	—	—	—	—	—	—	—	—	—	1	1	—	—	1	1	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	10
147	—	—	—	—	—	—	—	—	—	—	1	—	—	1	3	2	—	—	1	—	—	—	—	—	—	—	—	—	—	—	17
148	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	9
149	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	1	—	2	1	1	1	—	—	—	—	—	—	—	—	10
150	—	—	—	—	1	—	—	—	1	—	1	2	1	2	1	1	—	—	1	1	—	—	1	—	—	—	—	—	—	—	11
151	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	1	—	—	—	—	—	—	—	6
152	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	3	—	—	—	1	—	—	—	—	5
153	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	4
154	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	5
155	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
156	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
157	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
over	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	2
	2	—	1	3	1	2	2	3	9	10	13	16	4	21	15	10	11	7	11	20	6	9	8	4	3	4	1	1	2	1	200

were three in number—the Wiltshire reformatory near Warminster, more than half the inmates of which are recruited from Wilts and Dorset, the Kingswood Reformatory near Bristol, where the lads belong in large majority to Bristol or London, and the Clifton Industrial School, where the boys are all under 16 years of age and, therefore, are not fairly comparable in some respects; they come mostly from London or Derby, or in a few instances from Bristol. The tables will give the physical characters ascertained.

TABLE IV.

Indices.

Kephalic.				Of Nigrescence.	
		No.		Simple and Compound.	
London	....	52	76·77		
Bristol	....	67	77·34	Naval boys: pure dolichos, 75 and under (live measure).	
Derby	....	14	78·7	30. Indices — 18·3 and — 15·8.	
Plymouth	....	9	79·68	Ditto pure brachys, 82 and over, 13. — 42 and — 36·4.	
Wiltshire	....	20	76·7		
Dorset	....	15	79·08	Wiltshire, 20. — 15 and — 25.	
Devon and Cornwall		13	79·64	Plymouth, Devon, Cornwall, Dorset, 38. + 7·9 and — 5·8.	

The dolichos are, as Ammon found at Karlsruhe, mostly divided between the very fair and the distinctly dark, while the brachy are mixed, but often fair or red. The simple index is gotten thus: Dark + 2 Black — Fair — Red, the proportion of the black being doubled to express the greater melanosity; the compound index (Topinard's), is gotten by subtracting the light eyes from the dark, adding together the two indices, of hair and of eyes, and dividing the result by 2.

GENERAL RESULTS.

The boys belonging to the Navy have larger heads than those of the reformatory and industrial school boys. If anything, their heads are slightly broader, but within the limits of error; and indeed it seems pretty clear that the differences in kephalic breadth-index are connected with locality, *i.e.*, something racial or hereditary, rather than with any other difference. In truth, the great majority of these reformatory boys do not seem to me to be radically bad lads; and this is the opinion of their governors and of those who have most to do with them. Still they may be taken to be slightly inferior, as a whole, to the Navy boys in moral as well as physical character; and this inferiority seems to be correlated with smaller size of brain. Muffang attributes the smaller size of brain in the lower class to insufficient nourishment in childhood; I should rather ascribe it to heredity, and to the fact of the larger-brained people having risen in

TABLE V.—*Colours in the several Lists.*

	Eyes Blue.					Eyes Grey.					Eyes Neutral.					Eyes Hazel or Brown.					Index of Nigrescence.	Compound Index.					
No.	Red.	Fair.	Brown.	Dark.	Black.	Red.	Fair.	Brown.	Dark.	Black.	Red.	Fair.	Brown.	Dark.	Black.	Red.	Fair.	Brown.	Dark.	Black.							
Naval boys ...	200	5	47	20	2	—	74	1	10.5	14	3.5	—	29	1	9.5	19	4.5	—	34	1	6	19.5	36	.5	63	—	—
Per cent. ...	—	2.5	23.5	10	1	—	37	.5	5.2	7	1.7	—	14.5	.5	4.7	9.5	2.2	—	17	.5	3	9.7	18	.2	31.5	—	17
Warminster Reformatory School.	64	1	6	6	4	—	17	—	7	4	5	—	16	—	2	6	5	—	13	1	1	8	8	—	18	+ 6.2	— 8.5
Kingswood Reformatory School.	73	4	12	8	5.5	.5	30	1	2	4	4	—	11	1	2	2	3	—	8	2	3	8	11	—	24	— 3.4	— 13.3
Clifton Industrial School.	43	—	5	8	—	—	13	—	—	4.5	2	.5	7	—	3	—	4	—	7	1	5	—	9.5	.5	16	+ 8.1	— 0.6
Total ...	180	5	23	22	9.5	.5	60	1	9	12.5	11	.5	34	1	7	8	12	—	28	4	9	16	28.5	.5	58	—	—
Per cent. ...	—	2.7	12.7	12.2	5.3	.3	33.3	.5	5	6.9	6.1	.3	18.9	.5	3.9	4.4	6.6	—	15.5	2.2	5	8.9	15.8	.3	32.2	+ 2.4	— 8.8
London born. {	Naval	28	1	5	3	—	9	—	1.5	3.5	1	—	6	—	1	2	—	—	3	—	.5	2	7	.5	10	= or 0	— 8.9
	Indus.	24	—	4	3	—	7	—	—	2	1	—	3	—	1	1	2	—	4	—	2	—	7.5	.5	10	+ 18.7	+ 9.3
Total ...	52	1	9	6	—	—	16	—	1.5	5.5	2	—	9	—	2	3	2	—	7	—	2.5	2	14.5	1	20	—	—
Per cent. ...	—	2	17.3	11.5	—	—	30.7	—	2.9	10.6	3.8	—	17.3	—	3.8	5.8	3.8	—	13.4	—	4.8	3.8	27.9	2	38.6	+ 8.6	+ 1.8
Naval boys <i>Lion</i>	600	13	141	130	28	—	312	2.5	25	48.5	18	—	94	5.5	19.5	73	95	1	194	—	—	—	—	—	—	—	—
Per cent. ...	—	2.16	23.5	21.6	4.6	—	52	Joined with the blue-eyed.																	— 11.3	— 15.2	

Joined with the blue-eyed.

the social scale. Certainly the variations of kephalic index in boys from different localities seem too great to be accidental; though of course the numbers are very small. Thus in the Warminster Reformatory the twenty Wiltshire boys exhibit the length of head characteristic of the county (l. 185.5, br. 142.15), while the fifteen boys from Dorset have l. only 179.0 and br. 142.0.

The dolichokephaly of the London boys may be worth noting, for reasons which I will give presently. In twenty-eight London-born naval boys the index is 77.15, against one of 77.99 in the remaining hundred and seventy-two boys; while in the twenty-four London-born industrial school boys it is 76.2, against 78.12 in the remaining nineteen, who mostly belong to Derby.

The differences in complexion between the two sets of boys are not without interest.

It will be observed that the resemblance is pretty close between the percentages recorded for the two hundred boys belonging to the *Nautilus* and the *Lion*, whose heads were measured, and the six hundred of the *Lion*, of whom only the eyes and hair were noted, although the circumstances of light and mode of examination were very different in the two cases. But while the eyes of the reformatory boys come out very nearly like those of the naval boys, the former yield a much greater proportion of dark hair. We know, of course, that brown eyes and dark hair are particularly common in the criminal class, whether owing to their being largely the product of the slums or from some other cause¹; but I have already said that I do not think any large percentage of these boys is really and essentially criminal.

Of eighty-two naval boys, whose birthplace was ascertained, twenty-eight were Londoners, and only fifteen or sixteen came from villages or small country towns. Nevertheless, so far as I can judge, and making due allowance for their youthfulness, they inclined distinctly to the blond side as regards their hair. That this should occur in a body picked for health may be noteworthy in view of the supposed greater liability of blonds to several kinds of disease.

Red hair may perhaps be considered as rather deficient, seeing that it sometimes darkens into a deep brown at a later stage. Black hair is absent; only one London-born boy is set down with blackish-brown hair.

Among the reformatory boys are only three cases of blackish-brown hair; doubtless there would be a larger proportion in the same individuals at a later age. Red hair is more common among them—5.9 per cent.; but in several cases it appears coupled with brown eyes, often, I think, an unhealthy, as it is a dysharmonic, combination. Red hair belongs more to the upper classes; it may be that, as Havelock Ellis has suggested, it is weeded out of the lowest class by penury and unhealthy surroundings.

It will have been noticed that the London-born boys are oftener dark-eyed and dark-haired, as well as oftener dolichokephalic.

¹ An American observer, whose name I have forgotten, calls the brown the criminal eye.

Of course these differences are well within the limits of error; and the numbers are unfortunately very small. But when one considers how Ammon, De Lapouge, Durand, and others have shown that in Germany and France a dark dolichoid type tends to prevail in the cities through selective immigration and survival; when also one calls to mind that the Whitechapel skulls of Pearson and Thane, of which unfortunately we have not as yet full particulars, are known to have a dolichokephalic index, whereas other mediæval skulls, English and Scottish, are mostly mesokephalic or often brachykephalic,¹ one is tempted to think that these figures may be typical, or may represent the general rule.

¹ See my own *Histoire de l'Index Cephalique*, and Sir William Turner's work on Scottish skulls.

TABLE VI.—*Details of Warminster Reformatory Boys.*

[illegible]

LEGENDS OF THE DIERI AND KINDRED TRIBES OF CENTRAL AUSTRALIA.

BY A. W. HOWITT AND OTTO SIEBERT.

INTRODUCTORY NOTE BY A. W. HOWITT.

IN the preparation of a work on the native tribes of the south-east quarter of Australia, I found reason for doubting the correctness of a passage in Mr. Gason's account of the Dieri tribe,¹ which was quoted by Dr. Lorimer Fison and myself in our work *Kamilaroi and Kurnai*, in the year 1880. The murdu legend referred to speaks of the "Mura-mura, a good spirit," and to obtain some further information on this subject, I requested the Rev. Otto Siebert, who, as a missionary to the Dieri tribe, has exceptional opportunities for obtaining information as to their beliefs, to ascertain what the Mura-mura might really be.

For some years Mr. Siebert has co-operated with me in critically examining the laws and customs of that and other tribes in the country surrounding Lake Eyre. The following legends have been some of the results of our work, and I am glad to have this opportunity of acknowledging the great obligations which I am under to him for his valuable assistance, without which it would have been impossible for me to have got together the mass of information which is now in my possession awaiting publication.

The legends included in this paper are still under investigation as to some points which may not be fully elucidated, unless one of us may be able to be present at the ceremonies with which they are connected. Moreover the older blacks, who lived in the times before the occupation of their country by the whites, are now rapidly dying out, and with them the old beliefs and customs are being lost.

A. W. HOWITT.

The legends herein have been selected because they relate to the Mura-muras, who are represented in them as being a numerous tribe or people who preceded the present race, who wandered far and wide over Central Australia, and who lived lives much as their successors do, but who were magically more powerful than even the medicine-men of the present time claim to be.

¹ *The Dieri Tribe*, p. 13. Cox Adelaide, 1874.

The accompanying map (Fig. 1) shows approximately the position of the tribes whose legends are given or who are mentioned in the notes.

They all belong to what may be called a nation, that is a group of tribes who are more or less akin to each other, whose languages are alike, or, as to neighbouring tribes, merely dialects; who have the same class-organization under the names *Matteri* and *Kararu*, or their equivalents, and whose sacred ceremonies, whether for initiation or for the increase of the food supply, are practically the same.

This organization extends over a vast extent of that part of the continent, and, taking Lake Eyre as the central point, the range of these tribes stretches northwards to the Wonkamala and southwards to the Parnkalla, who occupied the country on the west side of Spencer Gulf, as far as Port Lincoln. This is an extent north and south of about 700 miles. To the north-west it extends to where it comes in contact with the southern part of the tribes, of which the Arunta is the typical example given by Spencer and Gillen. To the west its range is not known to us further than that it extends into the desert towards the Western Australian boundary. To the east the same organization obtains along the Barcoo river, as far, at least, as Mount Howitt, in latitude $26^{\circ} 32' 30''$ S., and longitude $142^{\circ} 18' 00''$ E. To the east and south-east the line of hills, running northwards from the Barrier Ranges, separates it from an analogous nation, which occupies part of the western waters of the Darling River.

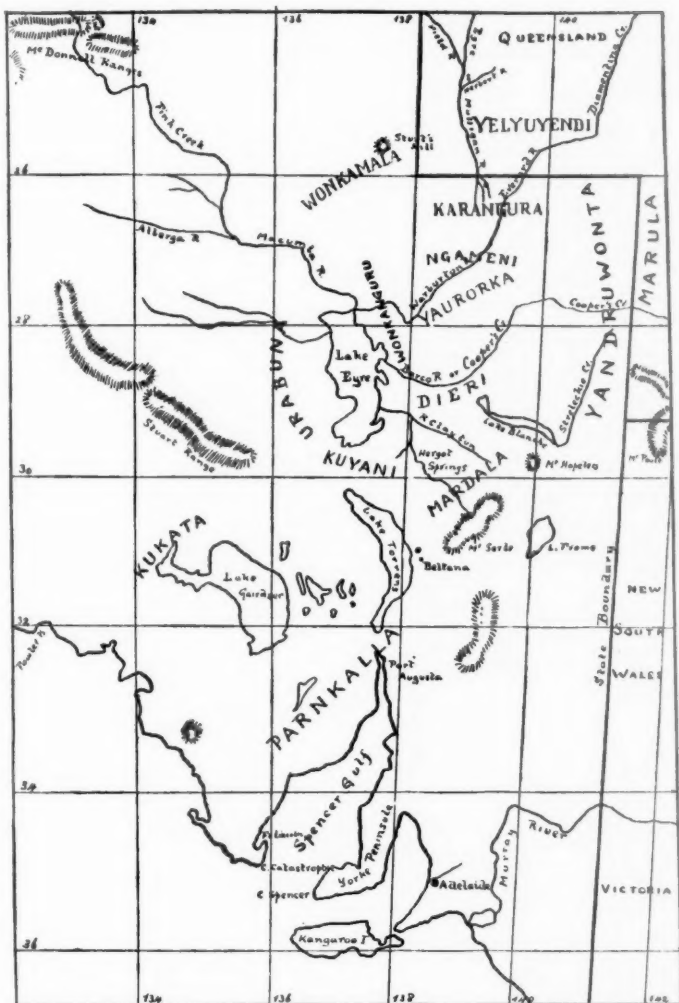


FIG 1.—MAP SHOWING POSITION OF THE TRIBES.

The legends which are given in the following pages are taken from tribes which, with the exception of the Wonkamala, lie more or less near to, and around Lake Eyre.

THE ORIGIN OF THE MURDUS AND OF THE KANA.¹

In the beginning, the earth opened in the midst of Perigundi² lake and there came out one murdu after the other, *kaualka* (crow), *katatara* (budjerigar), *warukati* (emu), and so on. Being as yet incompletely formed and without members or sense organs, they laid themselves down on the sandhills, which then as now, surrounded the lake. There lying in the sunshine, they were after a time invigorated and strengthened by it so that at last they stood up as *kana* and separated in all directions.

The Dieri point out an island in the middle of Perigundi as the place where the murdus came out. The legend not only accounts for the totem animals, but also for the *kana*, that is the native inhabitants of the Lake Eyre district. It also accounts, by the dispersal of the murdus, for the fact that the totem names are scattered over the country, but in such a manner that some are prevalent in one part, while others are prevalent in another.

HOW THE MURA-MURA PARALINA³ PERFECTED MANKIND. A MARDALA LEGEND.

The Mura-mura Paralina was out hunting kangaroos. While following one he saw four incomplete beings cowering together. Without noticing them further, he followed the kangaroo till he came to where there were two Mura-mura women who had already killed the kangaroo and covered it with *paua*.⁴ When he asked whether they had killed the kangaroo they denied having done so. Then Paralina thought of a trick. He loosened his belt (body string) into an immensely long cord, at the end of which he fastened an ant, which at once smelled out the meat, and with its comrades fell upon the dead kangaroo hidden under the *paua*. Paralina now followed the cord and discovered the kangaroo; and having cleaned the ants from it, he carried it away on his shoulders. Then he went back to the place where he had seen the cowering beings.

Going up to them he smoothed their bodies, stretched out their limbs, slit up their fingers and toes, formed the mouth, nose and eyes, stuck ears on them, and

¹ This word is properly *Madu*, but as I have written it in former works "*murdu*," I have retained the same form of orthography. *Kana* is the term applied to themselves by the Dieri and other tribes.

² *Perigundi* is a crooked or bent place; *Piri* is a spot or locality; *gundi* or more properly *kunti*, is crooked or twisted. This lake is so named from its irregular shape. It is now known as Lake Buchanan.

³ From *para*, hair. His girdle was made of human hair. The legend is current in the west and south-west of Blanchwater, that is in the country of the Mardala, in which kangaroo are plentiful. The Paralina Creek, which rises on the east side of the Flinders range, appears to be named after this Mura-mura.

⁴ *Paua* is the seed of plants used for food.

blow into their ears in order that they might hear. Lastly, he perforated the body from the mouth downwards, and projected a piece of hard clay (*daka*), with so much force that it passed through the body, forming the fundament. Having thus produced mankind out of these beings, he went about making men everywhere.

The three following legends relate to the wanderings, in each case, of two Mura-mura youths, who introduced the use of the stone knife in circumcision, as also the rite of subincision. The first belongs to the Yaurorka, the eastern Dieri and the Yandruwunta, the second to the Ngameni, Karanguru, and neighbouring tribes, and the third to the Urabuna Kuyani and other tribes down as far as the head of Spencer Gulf, and probably even as far as Port Lincoln. Thus these three independent legends confirm and complete a series extending over some 600 miles from north to south. The eighth legend extends this to 700 miles.

MANDRA-MANKANA, ALSO CALLED BAKUTA-TERKANA-TARANA OR KANTAYULKANA.

A DIERI LEGEND.¹

Mandra-mankana once came to the neighbourhood of Pando.² Two girls who saw him jeered at him, because his back was just the same as his front. He told their mother, who was his *noa*,³ to send her two daughters to his camp the following night. When she told them of his demand, they ridiculed him, but yet they went there, and lay down one on each side of the sleeping old man, their *ngaperi*.⁴ Then they heaped up a ridge of sand on either side of him, so that he thought his *ngatamura-ulu*⁵ were there. But these had meanwhile crept away out of the sand and lay down to sleep in the camp of their mother. When the *pinnaru*⁶ woke in the night he rose upright, and saw that he was quite alone, and that the girls had cheated him. Hence his name of *Bakuta-terkana-tarana*. He went forth thinking of revenge. Through his songs he caused plants to grow, some with bitter and some with pleasant tasting fruit. The two girls found these plants and ate first of the bitter and then of the good fruit. Delighted with the latter they sprang from one bush to the other. Thus after a time they came to a *tanyu* bush laden with its red and yellow fruit, where lurked *Mandra-mankana* in concealment, to destroy them. As they came near to him he threw his boomerang

¹ *Mandra* is belly or body, and *manka* is hind before. *Bakuta-terkana-tarana* is "the one who rises upright fruitlessly" from *baku* = fruitlessly, without avail, also free or unburdened. *Terkana* is to stand, and *tarana* is to rise up, to fly. Frequently in combination with a verb, it forms our preposition "up," as *terkana-tarana*, to stand up, *nayina-tarana*, to look up (upwards).

² *Pando* is big, or as this place is sometimes called *Pando-pirna* = Big-lake. It is Lake Hope.

³ *Noa* is the relation between men and women between whom marriage is lawful. In the Dieri tribe this relation may be defined thus, Ego being a Dieri man "My mother's mother's, brother's, daughter's daughter (own or tribal), is my proper wife."

⁴ Father, own or tribal.

⁵ *Ngata-mura* is the relation of a child to its father; *ulu* is the dual form.

⁶ Elder or head man.

at one and broke her ankle, and then rushing up he killed her by a blow on her head. The other sister ran away to save herself, but he followed her and killed her also. He then cut off the breasts of the dead girls and carried them with him as he went further. Coming to a camp where some young boys were amusing themselves in a plain by throwing boomerangs, he hid himself behind some bushes, and watched them at their play. Then one of the boys threw his boomerang so far that it fell near the old man. The boy sought for it and was about to take it when the *pinnaru* seized him by the hand. He was frightened, but *Mandra-mankana* calmed him by giving him a lizard, and he soon became friendly with him, and promised at his request to make a new song, and called to all the people to come and hear it. They assembled, even the sick and the women with child. The boy began to sing and the *pinnaru* came out of the bushes, painted and decked with feathers, and carrying the breasts of the girls hanging on his chest. He danced to the onlookers, in the front ranks of whom two young men, the *noas* of the girls, were sitting. These immediately recognized the breasts of their *noas*, and when the *pinnaru* retired dancing, they stuck their *kandris*¹ in the ground before them. When he again danced near to them, each seized his *kandri* and struck him so that both his legs were broken. Then they split his head open, and at the same time all the people fell upon him and even the children struck him. Then they buried him and laying his bag at the head of the grave they went elsewhere. One day a crow perched itself on the grave of *Mandra-mankana*. Three times it knocked with its beak on the wood which was lying on the grave, and cried "Ka! Ka! Ka!" Then the dead man woke up and came out of the grave, and looked round, but no one was to be seen. Then he looked for footprints and found that the people had all gone in the same direction, but by three different ways. While the strong and hale ones had gone, some to the right and some to the left, hunting as they went along, the old and the sick had gone straight on between the two other tracks. These he followed till he came to the neighbourhood of their new camp, and he concealed himself in the bushes near where they were busy in the creek, driving the fish together to catch them.² They had pulled up bushes and grass and were driving the fish before them with these in heaps. *Mandra-mankana* kept himself concealed in the water, and opening his mouth, he sucked in and swallowed the water, fish, grass and men. Some few who were at a distance, observing that their comrades and nearly all those who were fishing, had disappeared, and looking round to see where they had gone to, saw with alarm that the monster in the water had surrounded them with his arms. Only a few of them escaped by jumping over them. The *Mura-mura Kanta-yul-kana*,³ looking after them, gave to each, as he ran, his *murdu* name.

¹ The *kandri* is a boomerang-shaped weapon, with sharpened ends, used by the Dieri and other tribes. There is another *kandri*, which is a gummy substance obtained from the roots of a plant called *mindri*, or also *kandri-moku*, or bone-*kandri*, which is used for cementing chips of stone to wooden handles.

² At the Cooper north of Lake Hope.

³ Grass-swallower from *kanta* grass, and *yulkana*, to swallow or gobble up.

Those who ran to the north were the *kanangara*, seed of the manyura; *karabana*, bat; *maiarnu*, marsupial rat; *palyara*, small marsupial rat; *katatara*, budjerigar; *malura*, cormorant; *karawora*, eaglehawk; *warukati*, emu¹; *kaulka*, crow; *padi*, a grub called by the whites witchety; *karku*, red ochre; *woma*, carpet snake; *pitcheri*, Duboisia Hopwoodii.

Those who ran to the south-east were the *Chukuro*, kangaroo; *kintala*, dingo; *kani*, jew lizard²; *kaperi*, lace lizard, commonly called iguana; *kokula*, marsupial rat; *punta*, small marsupial mouse; *karabana*, marsupial mouse; *puralku*, pelican; *kuraura*, rain; *malbaru*, a crane; *tundu-bulgeru*, water rat; *piramoku*, native cat; *kaladiri*, a frog; *tidnamara*, a frog; *wilyaru*, curlew; *watari*, kangaroo rat.

Those who ran to the southward were the *markara*, native perch; *kirhabara*, eel; *yikaura*, dasyurus; *ngarumba*, box eucalyptus (*E. microtheca*?); *kanunga*, bush wallaby; *kapita*, rabbit bandicoot.³

The *mura-mura* now came out of the water, and vomited so that he threw out all his teeth, which are to be seen at Manatandrani.⁴ Having done this he went a little further and sat down and died.

This place is pointed out by the Dieri on the Cooper north of Pando, and the body of the *Mura-mura* is to be seen there also, turned into stone in the form of a great rock.

KADRI-PARIWILPA-ULU.⁵ A DIERI LEGEND.

Two *mura-mura* youths called *Kadri-pariwilpa-ulu* were out hunting pelicans at Perigundi. They crept along the creek, and threw their boomerangs at one which was swimming about. The right hand one struck his mark, but the boomerang of the other one flew wide, and as they were wading into the water to secure their prey, the boomerang swept past them, almost striking one of them on its return. The young men were determined to catch it on its next swoop, but its strength was such that they felt that no mere arm would be able to stop it. Then they procured the stem of a gum tree, by which they arrested it in its next flight. It cut the tree stem in two, but losing its own power, it fell into the water. One of the young men dived for it, but struck against the boomerang, which was stuck in the bottom, and which had become sharpened and pointed by its flight through the air. Thus it circumcised him and on rising out of the water he beheld, to his great joy, that he had now become a perfected man. He secretly informed his companion of what had happened to him, and he also, diving for the boomerang, was likewise circumcised. Both boys said to each other, "What has happened to us, for we are now no longer boys but men?" Being rejoiced at what had befallen them, they thought of their father, who, while they had become men, still remained

¹ From *waru* = grey and *kati* a covering, pelt. Thus, "the bird with the grey covering."

² *Amphibolurus barbatus*, Narrative, Horn Expedition, p. 28.

³ *Peragale lagotis*.

⁴ *Manatandra* is tooth, strictly mouth-fruit. *Manatandrani* is the dative.

⁵ *Kadri* in Yaurorka, or *kaiari* in Dieri, is river-course or creek; *pariwilpa* is the sky; *ulu* is the dual form, both. *Kadripariwilpa* is the name of the Milky Way.

a mere boy. They determined to make a man of him, and having provided themselves with a *tula*,¹ they crept up to him while he slept in his camp, and circumcised him. The great loss of blood weakened him and as he, notwithstanding the unhealed wound, continued to have access to his wife, *mira* came on and he died.²

As soon as the boys had circumcised their father they set out on their journey, everywhere circumcising youths and men. Coming to Kunauana,³ they found a number of people who had collected to circumcise young men by means of fire. They approached quietly and then suddenly springing forward, they circumcised the youths with their *tula*, before the men knew what was being done. Seeking for those who had performed the operation so skilfully, and seeing the two *Mura-muras* enveloped in a mist, they shouted out, "*Kadri-pariwilpa-ulu*."⁴ These now came forward, and showing the *tula* to them, said, "In future make your boys into men with this instead of using fire, which has caused the death of many, and they will remain living, for "*туру nari ya tula tepi*."⁵ Turning to the youths whom they had circumcised, they admonished them not to have access to women or even to be seen by them, nor to show their wounds to anyone, otherwise they would certainly die.

The two *Mura-muras* wandered through all the land, carrying the *tula* everywhere for circumcision, and being honoured as the benefactors of mankind.

MALKU-MALKU-ULU.⁶ A NGAMENI AND KARANGURU LEGEND.

A large number of people had assembled at Tunchara,⁷ for the circumcision ceremony, at which there was an old *Mura-mura* who had provided *palyara*⁸ for food, and who rejoiced over the sweet smell thereof, as it was being cooked. In the evening as they sat round the fire singing the *malkara*⁹ song, the old *Mura-mura* scattered the fire about, so that all those who were sitting round about it were burned by the hot coals. After a painful night the men were painting themselves at early dawn for the ceremony, and the six young men who were to be

¹ *Tula* is the word for a flint knife used for circumcision, and also for any sharp flint used for cutting.

² *Mira* is inflammation. This shows that while the Dieri attribute most deaths to evil magic, by someone "giving the bone," they also admit other causes. They say that long ago a great sickness came from the north and killed so many that when they woke in the morning "one was alive and the other was dead."

³ Properly *kudna-ngauana* from *kudna*, filth, excrement, and *nyauana*, light.

⁴ This passage is difficult, but may be made more clear by the description given of *kutchi*, an evil being, who is described as being seen sometimes in shadows and sometimes in whirlwinds of dust.

⁵ That is "Fire is death and the stone is life."

⁶ *Malku* is the Dieri word *walu*, meaning invisible, and also dust or mist. The *Malku-malku-ulu* are therefore to be pictured as the two invisible benefactors.

⁷ This is a Ngameni word meaning "powdered human bones," and refers to the number of bones which are said to have accumulated there by reason of deaths through the use of fire in circumcision.

⁸ *Palyara* is the long snouted marsupial rat.

⁹ *Malkara* is the word for the songs sung at the ceremonies.

initiated were brought forward. For each youth four men placed themselves, so that their bodies were bent outwards.¹ On these men the youth was laid, and in this manner two of the youths were circumcised by means of the firestick. Then the *Malku-malku-ulu* came up and instantly rushing forward, circumcised the four other boys with their stone knife, before the people knew what they were doing, thus saving the former from imminent death. Then going to the astounded men, they presented their stone knife to the *woningaperi*,² and told them to use it in future and thus preserve their boys from death.

Having done this, the *Malku-malku-ulu* went onwards, and at Kutchiwirrina,³ they saw at a little distance from them a spirit, in human form, suddenly disappear into the ground. In alarm they altered their course and went in another direction.

Decked with the *tippa-tippa*,⁴ the young *Mura-muras* wandered on, hunting and seeking food as they travelled, killing a *kapita* in one place and in another finding a tract covered with *manyura*, on which they feasted. After resting here for some time, they travelled further and found a kangaroo lair at Chukuro-wola.⁵ Thinking that there might be a kangaroo in it, the one who had the sharpest sight threw his spear into it and then also the spear of his comrade, who was one-eyed, but failed to find anything in the place. Immediately after they found a kaperi lizard, which they carried with them until it became stinking and black on the under side. As they still wandered on they came to a large tract of country well covered with rushes, of which they made bags in which to carry their things. Then marching on they saw a kangaroo, at which the sharp-sighted one threw a spear and then another without hitting it. Then he threw all his companions' spears but one, which he kept in his hand. Then throwing it, he killed the kangaroo, which they carried till they came to a place where there was water, where they rested for a time. Then lifting the kangaroo from the ground and each holding it by one leg, they swung it round their heads, singing:

"*Mina yundru tayila nganai?*

What thou eat wilt?

Tjuba-tjuba-tjuba yundru tayila nganai!

*Tjuba-tjuba*⁶ thou eat wilt!

*Mana-kata-kata*⁷ *yundru tayila nganai.*"

Mana-kata-kata thou eat wilt.

¹ This description is part of the legend. For every custom and rite there can be found in the legends the equivalent. If one asks "Why do you do this," or "Why have you this custom?" the reply given is "Our *mura-muras* did so and we follow them."

² The *woningaperi* are the men who perform the rite of circumcision. Apparently the equivalent of the *Atwia-atwia* mentioned by Spencer and Gillen, p. 647.

³ *Kutchi* is the spirit of the dead, a ghost, *wirrina* is to go into.

⁴ Only the circumcised men can wear the *tippa-tippa*, but it is also worn by the members of the vengeance party (*pinya*), tied to the end of the beard, and put in the mouth and bitten to show their anger.

⁵ *Chukuro* is in Ngameni a kangaroo, *wola* is a nest or lair.

⁶ and ⁷ *Tjuba-tjuba* and *mana-kata-kata* are both lizards.

Then they laid it on the ground, but no sooner had they done so, than it jumped up and hopped away so swiftly, that they could not overtake it. Before long, however, they killed another kangaroo. The one who had good sight sent the one-eyed one to fetch a *tula*, so that he could flay the skin off. While he was seeking for a *tula*, the other began to remove the pelt. When the one-eyed one returned with the *tula*, the other replaced the skin over the carcase and pretended to try the *tula* on it, then, saying that it was too blunt, he sent him to Antiritcha,¹ to bring back a new one. During his absence he hastily skinned the kangaroo down to the hind legs, and when the other returned from Antiritcha, and offered him the new *tula*, he said, "Skin the kangaroo with it yourself." Beginning to do this the one-eyed one found that the skin was quite loose and said, "Why have you cheated me in this way, by almost removing the skin?" "Don't be angry with me," said the other, "I only wished to have a joke with you and surprise you with an almost skinned pelt."

Having completed the skinning, they fastened the edges of the skin to the ground with pegs and raised up the middle, thus forming the sky. When this was done they said with satisfaction, "Now from this time people can walk upright, and need not hide themselves for fear of the sky falling."² Pleased with their work they turned homewards, and coming to a good pool of water one jumped in saying, "Let us bathe ourselves here," but in striking the water, it made a cut which caused subincision. When he showed this to his companion, the latter at once jumped into the water and he also became subincised. Looking at himself he said, "Now indeed I am a complete man, but it hurts me."

Having conferred on mankind the use of the *tula*, they now introduced the *dirpa*,³ so that by it a young man becomes a completed man.

The *Malku-malku-ulu* are the benefactors of mankind, and it is said that they still live and are even sometimes seen. They wander about invisibly, to relieve the distress of others. They carry lost children to their camps, and care for them till found by their friends.

The southern Dieri say that they wander far to the north of their country, and that their camps can be recognized by the luxuriant growth of the *moku*, a cucumber-like plant,⁴ which no one may eat, because it is the especial food of the *Malku-malku-ulu*.

One of these camps is said to be at Narrani,⁵ not far from Cattle Lagoon on

¹ After careful enquiries it seems to us that Antiritcha must be taken as a hill or mountain on the upper waters of the Finke River, probably in the McDonnell ranges, from whence *tula* and *wolkadara* are brought. The latter seems to be the same as the *churinga* of the Arunta.

² The belief is, that at first the sky was fastened down to the earth and that mankind could not walk about freely.

³ *Dirpa* is subincision, in Dieri called *Kulpi*.

⁴ Probably the *Cucumis trigonus* Linn.

⁵ *Narra* is an abbreviation of the Yaurorka word *narrangama* which is a shield, in the Dieri called *pirha-mara*.

the Birdsville road. This place is celebrated among the tribes because it was where the *Malku-malku-ulu* left their shields, when they commenced their wanderings, for being the benefactors of mankind, they did not need any weapons. But the original site of their home is said to have been the mountain Antiritcha, where lives *Artarurpa*. Who this was we have so far not been able to ascertain.

But the statement that the *Malku-malku-ulu* originally came from Antiritcha suggests that the rites of both circumcision and subincision have been brought from the north, in ages so far back that their introduction has become merely legendary.

THE YURI-ULU.¹ A LEGEND OF THE URABUNA AND MORE SOUTHERN TRIBES.

The *Yuri-ulu*, coming from the north, travelled through all the land, bringing in the use of the *tula* in circumcision. Thus they came to the Beltana country at a time when a youth was about to be made into a man. When the men were going to burn him with fire, the *Yuri-ulu* went into the earth, the one on his right and the other on his left, waiting for the moment when they could help him. When a man approached with a red-hot fire-stick to perform the operation, the two *Yuri-ulu* rose out of the earth, and instantly cutting off the foreskin with their *tula*, sank back into the ground invisibly.² The men who were present were astonished at the fresh wound, and saw that the boy had been circumcised. They questioned each other as to who had done it, but no one could say. The feeling was such that they began to say to each other, "Didst thou do this, or thou, or who?" and to grasp their weapons, when he, who was about to have done the operation, said that he would find out the cause. Seating himself on the ground and striking it with a club, he sung continuously that he, who had circumcised the boy, should come forth. Then the *Yuri-ulu* rose out of the earth biting their long beards, and each holding a *tula* in his hand before him.

Then properly painted and adorned, they danced and having given the *tula* to the men, whom they admonished as if they had been youths, disappeared whence they came, followed by the praises of the assembled men.

After showing themselves in many places as life-givers, they turned back, and at Katitandra³ one went west, and the other went east and northwards, bringing the *tula* to every tribe.

Thus they still wander showing themselves at times as living and as life-givers.

The following legend does not seem to have any direct connection with the preceding one, but speaks of the *Yuri-ulu* as being boys who had not yet been circumcised, while in the other legend it speaks of them as the originators of the

¹ *Yuri-ulu* or *tepi-ulu* is the two living ones.

² The Kunkis, the medicine men, claim for themselves to be able to suddenly disappear into the earth.

³ Katitandra is Lake Eyre.

practice. This is remarkable, because while the last legend belongs to the Urabuna, this one belongs to their neighbours, the Wongkanguru.

THE YURI-ULU. A WONGKANGURU LEGEND.

An old blind widower lived at Mararu,¹ with his two sons the *Yuri-ulu*, who from their early youth had to provide him with food. As they became older they went further afield hunting, and delighted to kill young birds with the boomerang, and when they returned at evening to their camp, to cook them for their father. One evening on returning, they observed that an old man had come to the camp, and had seated himself close to them. They informed their father and he told them to call the stranger. They did so, but received no answer, and even when they went to him and invited him to come to their father, he still remained silent. Not troubling themselves more about him, they ate their food, and darkness having come on, they lay down and slept. In the early morning the boys went out hunting. Then the stranger, after having warmed his hands at the fire to strengthen himself, seized the blind man, wrestled with him, struggled with him, struck him on the face, and scratched his face till the blood came. Then with a piece of wood he scraped the blood off. By the struggling and the scratching the dimness of the old man's eyes had been removed, so that he could see better than before. As the stranger had done to him, so he now did to the stranger, struck him and scratched him until the blood came, which he wiped off and then recognised the stranger as his *kami*. After they had recognised each other as *kami-mara*² they sat down together, and the stranger told him that he had come to consult with him as to the circumcision of his sons. The two, having decided that the boys should be circumcised, commenced their preparations. Stone axes were sharpened, *kandri* melted, *ngulyi*³ collected, and the axes fastened afresh to their hafts with them. The boys were sent out early next morning to hunt, and to be out of the way, while the old men were at work, so as not to see what they were doing. These went to a place where there was a great *pirha*,⁴ that is, a great tree, which they cut down, separated a piece of the stem, and having removed the bark, hollowed it out to make a great *pirha*. Then they placed it in hot moist earth to soften, and kept its sides apart by pieces of wood till it became cool.

¹ *Mararu* is to complete with the hand, to strike the *pirha*, that is to strike the upturned wooden bowl, in a dance. *Mara* is hand, and "*ru*" is the Wongkanguru causative termination, which is in the Dieri "*li*," as *mararu*, *marali*. The place Mararu is said by our Wongkanguru informants to be not far from Birdsville in a south-westerly direction.

² *Kami* is the relation of the children of a man to those of his sister. *Kami-mara* is *Kami-ship*.

³ *Ngulyi* is the kino of an eucalypt.

⁴ *Pirha* is, as before said, a bowl, cut out of a block of wood. These natives speak of a thing as being already completed, when they have the material ready. Thus a Dieri will say when he has found a tree suitable for a *pirha*, "*nauda ngakani pirha*," that is my *pirha*, and so also as to other things as weapons, etc. Mr. Siebert has a *pirha* which is 4 feet long and 21 inches in diameter.

The following morning they ornamented it with longitudinal markings and laying it on its back, the stranger struck it with his open hand. Listening, but hearing no reply, he struck it again but harder, and there was an echo, which they thought was a reply by the women at a distance.

Early on the following morning while the boys were still asleep, the stranger started homewards to *Minka-kadi*,¹ to call together the people for the ceremony, at which the boys were to be circumcised. After a time he returned with them, bringing with him his two daughters, who, as he and his *kami* had agreed, should be the wives of the two boys.²

Then while the boys were out hunting, there was held a meeting of the old men, at which they consulted as to the manner of conducting the ceremony. Towards evening, as the boys returned, a number of men were lying in wait for them, and two who were *kami* and *kadi*³ to them respectively, sprang forward and laid their hands on the boy's mouths, as a sign that they should not henceforth speak to any but themselves. Then they took them apart to a place where they built a breakwind (*katu*), and taught them the *pirha* song. Early the next day the women and children and the two boys were sent to a distance to hunt, so that the men might hold a council undisturbed. They collected the *tulas* and selected the good from the bad. Then they decided what presents the boys should give to the *woningaperi*.

In the evening, when everyone had collected on the ceremonial ground, the *Yuri-ulu* returned. As they approached, a few of the men joined them, then more, until by the time they had reached the ground, they were surrounded by a great crowd, not counting the women and the children. The *Yuri-ulu* were then taken behind their *katu* to be decorated with emu and cockatoo feathers. When this was done the boys were openly led to the ground, across which they marched, and each one standing on a *pirha* which rested on two spears, grasped the *kalti* as high up as possible, being supported by his *kami*. Thus they remained for some time. The *ngandri* (mothers) were sitting in a row which extended from their *katu* to the *kalti*,⁴ having on each side the *katus* of one-half of the *ngaperi* (fathers). One after the other the mothers, who were seated, rose and went to each of the boys and with her open hands stroked him about the navel. When the last one had

¹ *Minka-kadi*, from *minka*, a hole or cave, and *kadi*, deep. It is said that there are many in the district to the east of Mararu.

² It is remarkable that in this legend the "fathers-in-law" are *kami-mara*, while in the Wonkanguru, as among the Dieri, it is the mothers-in-law who must be of that relation. Possibly the explanation may be that the legend has its origin in a tribe further to the north, which, like the Arunta, has descent counted in the male line.

³ The *kami* and the *kadi* (wife's brother) have charge of the boy during the ceremonies, and lead him away after the operation has been performed. The *neyi* (elder brother) and the *kaka* (mother's brother) provide food for him and accompany him later on. Men of these relations are chosen who are much senior to him, in order that they may instil respect for the laws, which they impress upon him.

⁴ *Kalti* is a spear, but also the spear-like pole used in these ceremonies. It seems to be the equivalent of the *Wananga* described by Spencer and Gillen.

returned to her place, each boy was carried to his *katu*, on the back of one of his *kami*, where his ornaments¹ were taken from him and carried to his father, to be given to those who performed the rite of circumcision on him. Then the muffled sound of the *pirha* being struck was heard, and shortly after the sisters of the *Yuri-ulu* came forward, and commenced their dance in parties of four each, one of the elder and one of the younger. At the end of this the men carried each other about on their backs.

About midnight the women were driven away from the ground to their main camp, the *ngandri* only remaining behind, at a little distance, forming a connection between the men at the ground and the women at the camp, but also keeping the latter quiet, and seeing that none of them watched the ceremony with impertinent curiosity. In order to keep the women, and especially the *ngandri*, informed as to the beginning of the ceremony, the great *pirha* was struck several times, and replied to by the *ngandri* striking on their stomachs with the open hand.

The boys were now taken to the camp of the *ngaperi* and there carefully watched by their *kami* and *kadi*, so that they should not sleep, being shaken up into wakefulness when they dozed off. Then the *woningaperi* and the *taru*² came up to them decked with feathers, and three *neyi* of each boy placed themselves together so that the boy could be laid on their backs and there circumcised by his *taru*. This being done their *woningaperi*, the *kadi*, *kami* and especially the *taru*, were placed before them, and the latter gave to each a bundle of the hair of one of his daughters, as a sign that she should be his promised wife. Then the boys were taken back to their *katu*.³

THE WANDERINGS OF THE *Yuri-ulu*. A WONKANGURU LEGEND.

After the *Yuri-ulu* were circumcised at Mararu they went off on their wanderings alone, and came to the Kadla-lumpa⁴ creek, where they refreshed themselves with the water which bubbles out of the earth there. They collected emu eggs at that place and the bird attacked them, but was driven off by their shouting and throwing sand and dust at it. The sand and dust, however, which they had thrown up into the air came upon them as a cloud, the *nilla-nilla*,⁵ which raised the sandhill on which they stood high up in the air. But through fear they

¹ Such ornaments are given to the boy by his *ngandri*.

² The *taru* is the father-in-law.

³ This description of the ceremonies is part of the legend, and it is the precedent for the existing practice. The natives say, "Our *Mura-muras* did so, therefore we must do so likewise." In the ceremonies three young men place themselves with the upper part of the body bowed in such a manner, with the legs apart, that they touch each other behind, while the upper part of their bodies and the neck and head, extend outwards horizontally. The boy to be circumcised is laid on their bodies so that one leg is on the one, the other leg on the other, and his body on the third. See Roth, *Ethnological Studies*, "Queensland Aborigines," 1897, Figure 415, in which, however, the positions differ somewhat from those described in this legend, and taken up at the ceremonies.

⁴ *Kadla*, rushes, and *lumpa*, a spring or well.

⁵ A mirage. To spread itself out.

threw themselves down on the ground and lay there for some time insensible. When they recovered they found that the *nilla-nilla* was gone, and putting the eggs in a bag they went on to Urakuroka,¹ from whence they saw great columns of smoke rising up and spreading out wide and far from the place of circumcision at Mararu. Wandering further they came to a place where they found a great number of lizards, and at another they collected stone for knives, which, however, were not good. Then at Kalilte they observed that they were inflamed from the circumcision, but it left them at Kalpinta and Laratjilkira,² and they rejoiced that they were now full men. At Nalpawira they caught a small lizard, the *pitjila*,³ which lived under the bark of the trees, and killed it, but then regretting this they swung it round their heads to bring it to life again. Feeling very cold at Kurampa, they threw glowing coals in the grass, which taking fire drove the cold away. From this place they went to Kililti, where small kidney-shaped stones are plentiful,⁴ with which they filled their bags. Then placing themselves a long distance apart, one threw *pundra* which the other tried to hit and break with a stick. Having finished this game, they collected the small fragments for *tulas* and placed them in their bags.

Still travelling on, a great rainbow appeared after a shower. Alarmed at this they halted, but thought that it was only a gigantic *Kadi markara* (p. 127). Then, having given names to the rainbow and to its colours, they went on, but with caution, fearing that the portent might again come upon them, and looking back at it till it disappeared. On their way they saw the footprints of the *Mura-mura Markanyankula*,⁵ but as he must have passed the previous day and reached Antiritya, they could not overtake him.

On their further wanderings, at one place they collected *yaua*,⁶ at another killed a waterhen, and at a third dug out some *kapita*, and then found a nest with a young eaglehawk. At length they reached the other side of the ranges, where it became darker and darker, and feeling round with their hands, they found a continuous hard surface. They struck it with their fists and with their boomerangs and spears, but in vain. Then the elder of the *Yuri-ulu* pushed the obstruction with his finger and it opened, and they saw a new country covered with trees and bushes. Looking back at what they had passed through, they recognized it as being the edge of the sky, but they did not wander long in this country, for the younger of the two died. The elder still went on, but after a time he also died. Then they both returned to life, and called to their father with the voice of thunder that they had died in a strange land and could not return again. He, hearing their voices, mourned for them.⁷

¹ The meaning of this name has not been ascertained. ² The names have not been explained.

³ From *pitji*, the bark of a tree and "*la*" showing its derivation.

⁴ Called *pundra-pundra*, from *pundra*, kidney.

⁵ This relates to the wanderings of another *Mura-mura*.

⁶ *Yaua* is a grass-like plant with a small bulb.

⁷ Even now the thunder is said to be the voice of a dead person, who announces that he has returned to life.

These two Wonkanguru legends might be well divided into three: first, the preparation for the ceremony, second, the ceremony itself, and third, the wandering of the Yuri-ulu after circumcision.

The mention of the *pirha* in these ceremonies and the dances of the two sets of women, the elder and the younger sisters of the Yuri-ulu, connects it with the Pirha-malkara legend, in which the wanderings of the elder and the younger girls, with their *pirha* song, is given. The wanderings of the Yuri-ulu past Antiritcha, which we identify with some mountain in the McDonnell ranges, fixes the limit of the wanderings as being somewhat beyond the termination of those mountains.

A CIRCUMCISION LEGEND OF THE EASTERN DIERI AND THE YAURORKA TRIBES.

A girl met her brother, and observed on him the effect of circumcision. Hastening to the *pinnaru*, her father, she told him what she had seen, and asked him how it had been done. Instead of replying to her question, he became enraged, and scolded her, saying, "Why did you meet your brother and see his wound?" He sent his wife away, and with his friends dug a long and deep hole. Then he called the people together from all quarters. The old men threw fire into the hole till it was red-hot, and then called all the women and children to the side of the pit. These obeying the call, the *pinnaru* ordered them to place themselves in groups round it and to dance when the song began. This they did, a man dancing with his wife, a *pirauru*¹ with his *pirauru*, three youths together, and so on, till the *pinnaru* surrounded them and pushed them, one group after the other, into the pit. Only a few remained alive of all those people, and the *tidnamadukas*,² who lived in that locality, observed that they intended to throw all of them also into the pit. Running together hastily, they threw their boomerangs at the old men and broke their legs, so that they could not escape. Then they threw them into the same pit, which they had intended for them.

The intention of this legend appears to be to account for the taboo which exists between the boys after circumcision and the women of the tribe, and especially their sisters, who are forbidden under the penalty of death to see them until their wounds are healed.

The two following legends recount the wanderings of two parties of young *Mura-mura* women carrying a dance and a song, which is shown in the wanderings of the Yuri-ulu to be connected with the ceremonies of circumcision.

¹ A *pirauru* is either a group-husband or a group-wife.

² From *tidna*, a foot, and *maduka*, a mother or grandmother or ancestress. A *tidnamaduka* is a man who claims a certain tract of country as his, and whose mother and her brothers claim it for him. *Tidnamaduka*, or shortly *maduka*, is the complement of *pintara*. *Maduka* includes everything belonging to the maternal line, as *pintara* includes everything belonging to the paternal line. For instance, a father's *Mura-mura* and his "fatherland" is his *pintara*, while the mother's brother, speaking of his mother's *Mura-mura* and his "motherland," calls it his *maduka*.

The wanderings commence at some place far to the south-west of Lake Eyre in the country of the Kukata tribe, if not even still further south among the coast tribes. They extend thence to the south-west of Lake Eyre at Coward Springs, and thence continue round the south of the lake, to the Lower Cooper. Here there are petrifications which mark the localities mentioned, and which are recognized as *Mura-muras* turned to stone; in fact they are the girls, who, however, are still said to wander further. Thus they are seen as petrifications where they concealed themselves from the *Mura-mura* follower and ridiculed him. Also where they threw the *wona* there are stones commemorating them. The traces of this game are pointed out in straight rows of petrified trees, which are held to be "*Mura*," that is to say, sacred things which no one may injure.

The first legend is composed of two parts, which are conjoined for convenience of narration. The first part is the *Pirha-malkara* or the Bowl song, which belongs to the Urabuna, Tirari, and other neighbouring tribes, and ends at a place called Pala-unkina. The second commences at Pundu-worani, and belongs to the Wonkanguru. The third part is from the death of the *Mura-mura Madu-puta-tupuru*, and introduces another travelling group of young women, who also carry a song, that of the *wapiya* or boomerang.

This latter part was obtained from an intelligent old man of the Wonkamala tribe to which he belongs, and was subsequently confirmed by one of the Wonkanguru, who had lived for a long time among the Wonkamala and whose wife was of that tribe. The second part of the legend, namely from Pundu-worani, was obtained from his brother and other Wongaruru men.

The Wonkamala man came to the Dieri as the head of a party bringing the Mulunga dance from the north, and subsequently he went away southwards.¹ Later on he returned northwards, but became ill and died near Killalpanina. He was considered to be a great medicine-man, and it is said that a party from his tribe is to come down to take his bones back to his own people as powerful magic. After his death some of his party carried the Molunga dance to the south, and the others went round the south end of Lake Eyre to the north-west.

This is an instance of the manner in which wanderings still take place among the native tribes of the interior, by men whose mission accredits them to the tribes to which they come.

THE PIRHA-MALKARA. LEGEND OF THE WONKANGURU TRIBE.

A number of girls, the *Mankara-waka ya pirna*,² once made a journey accompanied by their father, the *Mura-mura Mada-putu-tupuru*, who was an

¹ See Roth, *op. cit.*, pp. 120, 125.

² *Mankara* is girl, *waka* is little, and *pirna* is big. *Ya* is and. These girls are by another legend transferred to the sky as stars, the former being the Pleiades and the latter the stars in the belt of Orion. The *pinnaru Mada-putu-tupuru* in the first part of this legend is called *Marukao lana*, and is the principal star in Scorpio. The name *Mada-puta-tupuru* is "thick smoke," in which it is said that he sat by his fire.

old fool about women, and closely followed them. They started from Malku-malku and marched from place to place, singing and dancing, the *pinnaru* following with his many dogs. Then they marched through the Midlaleri country,¹ and at the south end of Lake Eyre they found many *Yava* (*yelka*) and called the place *Yelka-bakana*,² where many girls joined them. Then they went southwards round the lake to the lower reaches of the Cooper, where at Ditjiminka³ other girls also joined them.

Meanwhile, the *pinnaru* had fallen behind in his watchful pursuit, and saw, when seeking to follow them, that there were tracks of many strange girls, who had traversed the whole place in search of mice. He followed these from Nidli-barkuna,⁴ to Pala-unkina,⁵ where he found all the girls hidden from him behind bushes. To mock him each only showed her hair tied to a pointed shape called *wilburu*,⁶ so that he could not distinguish one girl from the other. From here they marched to the north-east, where at Pundu-worani⁷ they made nose-pegs for themselves of *kuyamara* wood.⁸ With these the septum of the nose of each was bored and the peg left therein, till they arrived at Paia-mokuni⁹ and replaced them with the quills of pelicans. At Dulderana,¹⁰ they observed a wild dog, which they enticed to come to them by calling to it "*Duldera! Duldera! Pa! Pa! Pa!*" The dog *Duldera* came to them and became their faithful companion.

Because of the great cold at Ngunku-purunani¹¹ they caused dense bushes to grow up, behind which they cowered close together. Again marching on they saw a cormorant's nest, after which they named the place Tantaniwirrinani.¹² Having killed and eaten the cormorant, they again marched on, and came to a place where there was a great abundance of *pilla*¹³ growing on the sandhills, and named the place after it Piltakali. Another place, where they made a hut of the *kulua*, they

¹ *Midla* or *mudla* is nose, point, or promontory, and *leri* is steep. It refers to the fact that at that place the sand ridges are very steep. This place is in the country of the Wimberinya, a small horde of the Kukata tribe on the west side of Lake Gairdner.

² *Yelka*, a grass-like plant with small bulbs.

³ From *Ditji*, the sun, and *minka*, a hole. It is said that at that place the sun had a hole into which it went at night. It is situated about 20 or 30 miles from Killalpanina, near Lake Eyre.

⁴ *Nidli* is a mouse and *barkuna* is to dig.

⁵ So named from the shameless behaviour of the *Pinnaru* towards the girls.

⁶ This is the word applied to the universal practice of tying up the hair.

⁷ *Pundu* is the name for the nose-peg, and *wora* is the plural postfix.

⁸ *Kuyamara* is a bush, the twigs of which are used in the funeral ceremonies of the Dieri.

⁹ *Paia* is bird, and *moku* is bone in the usual sense of the word, but is also used for something hard in contrast with something soft. Thus in the Dieri language *punga-moku* means the "beams," that is the "bones" of the house (*punga*) at Killalpanina, and *pita-moku* is wood-bone or tree trunk.

¹⁰ *Dulderana* is light-coloured or white, thus applied to a light-coloured pelt.

¹¹ This means "cowering together in a mob," from *puruna*, to cower, and *ngunku*, a mob or number of people.

¹² *Tantani* is in Wonkanguru a cormorant, in Dieri *malura*, *wirrinani* in Dieri is to go into something.

¹³ *Pilla* is in Dieri *wirra*, one of the Acacias, the leaves of which are burned by the blacks and the ashes mixed with *pitcheri*.

called Kuluantjudu,¹ and they named the place where they cleaned ants' eggs from the attached earth, Patja Kana.² A place where, by reason of the great cold they made a fire to warm themselves, they called Makatira,³ because when marching they carried a piece of lighted wood. They came to Kakurawonta⁴, where a hawk flew off its nest when they broke some twigs, and the girls were so startled that they all shrieked out, and each wished to be the first to find the eggs, which they shared between them. This place was named from the Kakura bush, the fruit of which they plucked as they travelled. Their next halt was at Tindi-tindi-kupaworana,⁵ where they tried to catch a *tindi-tindi* and its young, but without success, and then went on to Warukati-walpu,⁶ where they collected the bones of an emu which a wild dog had killed. From them they prepared some paint, with which they painted their faces, breasts, and arms.

By this time the cold season had passed over and the sun became very hot. It had not rained for a long time, and they suffered very much from the great drought. To save themselves from perishing, they dug holes at Pulyudu,⁷ throwing the earth out backwards, and so travelled underground in the damp earth. The *pinnaru*, who had marched on in advance, wondered that he had not seen any of his daughters following him, and went back to seek them, but without success. At Ningkaka,⁸ where he stood on a sandhill looking round about for them, the summit of the hill was flattened and widened by his steps. Still keeping on the watch, he observed that the girls appeared at the surface at Dityina,⁹ where they played about actively, and at Wonamidlanina,¹⁰ where they threw the *wona* in competition with each other. They then let the wind carry away bunches of the *Mindri*, and running after them, caught them again. As the *pinnaru* persisted in watching them with longing, they covered themselves for the sake of modesty with *karpana*¹¹ at a place called Mankara-timpi-worana.¹² In the lake at that place, they disported themselves in the water by striking it with the flat of the hand, and thus raising themselves up and again sinking down in it. Then the *pinnaru* involuntarily said these words¹³ :—

¹ The *kulua* is a Hakea.

² *Patjakana* is to winnow or clean from earth, as is done with two *pira*, the contents being thrown up in the air from one, and other things being caught in the other, the refuse being blown away.

³ *Makatira* is a fire-stick, in the Dieri, *turumanya*, i.e., "make a fire," from *туру*, fire.

⁴ *Kakura* is a bush which bears edible fruit.

⁵ The *Tindi-tindi* is probably one of the flycatchers, called by the whites "wagtail," *kupa* is child, and *worana* is the plural postfix.

⁶ *Warukati* is emu and *walpu* is bone.

⁷ *Pulyudu* is a burrow made by any animal which throws the earth out behind it, such as the *kapita* or the *madagura* (the kangaroo mouse).

⁸ To look out.

⁹ To appear shining, in Dieri, *tjirdinato*.

¹⁰ The *wona* is an instrument used in sport and for fighting by the women.

¹¹ To weave together; *kanta-karpalina* is to weave grass for a covering.

¹² *Timpiwora* is a plant, which we have not identified.

¹³ In Wonkanguru.

Anto nupa kairi balanpa pitaira.
my wives they sliding (in) water strike (it).

The girls hearing this cried out "What do you want?" to which he replied "Nothing. I was only calling my dog Dulderana."

At the next resting place at Nipatakaka,¹ the older girls told the younger to spread out the skin rugs to dry, so that they should not be spoilt. The *Mankara-waka* did this, stretching them out with wooden pegs.

After that, they remained at Nipatakaka for some time, then marching further to Kalyara-kodiangu,² where the *pinnaru* brought all the girls before him and wished to take the youngest for his wife. Here an immense flood overtook them, extinguishing their fires, covering their camp, and driving them on to the sandhills. The *pinnaru* endeavoured to stay the flood, but was driven by it to Kaliriwa,³ where the whole of the flat land was covered by the waters. He took refuge on a sandhill called Yendada,⁴ but the water rose higher and higher until it was covered, and the *pinnaru* fell on the ground exhausted, from which the place was named *Madaputa-kuda-kudana*.⁵ Hastily rising, he made a mound of earth at Wadlupirpaka,⁶ but in vain, as was also his attempt to stay the waters at Wolka-wolka⁷ by driving stakes into the ground, fastening cross pieces to them and covering them with grass and bushes. The current broke through and carried it all away.

It was only at Kirha-kudaka⁸ that the *pinnaru* succeeded in stopping the further spread of the flood waters by sticking his boomerang in the ground with the back towards the current. Then having brought the waters to a standstill, he converted them with his hand into a widespread layer of salt at Mara-karaka.⁹

The next three stations on their march received their names from the dances which the *pinnaru* taught the girls, namely, *Ndaparatyerki*, from the waggling of their breasts in the dance, *Wirintjangura*¹⁰ from the great fire round which they danced, and *Kinyindi* from the quivering of their thighs in dancing.

The *pinnaru* beat time to the dance and sang to it.¹¹ From Wirintyangara

¹ *Nipa* is clothing and *takanā* is to peg out.

² *Kalyara* is quick, *kodiangu* is to flow or run like water.

³ To overflow, to blot out, to cover the ground.

⁴ *Yendada* is ridicule.

⁵ *Madaputa* is the Wonkanguru word for *pinnaru*, and *kudakudana* is to fall down.

⁶ *Wadlu* is sandhill, in Dieri, *daka*.

⁷ *Wolka-wolka* is any young animal.

⁸ *Kirha* is boomerang and *kudaka* means fall down. If the natives at Killalpanina wish to stop the flood waters from spreading, they stick a boomerang in the ground, especially of that kind that returns when thrown, such as the *wonamaru*. Thus the Kopperamana and the Killalpanina blacks think, when the flood waters do not extend to them, that the people at Pando (Lake Hope) and Perigundi have stopped their flow in this manner.

⁹ *Mara* is the hand and *karaka* is to touch.

¹⁰ *Wirintja* means fire and *ngura* is camp.

¹¹ The time is marked in the singing of this song by striking on the *pirha* with the hand, hence the name "*pirha-malkara*."

they went to other places where they danced, and the girls being fast asleep at one place, were wakened by *Madaputa-tupuru* making a great noise by striking his *pirha*. When the girls started up in alarm, he said "*madagura yidli-yidli madagura*,"¹ and then, "Did I not think that you would keep the *madagura* from me, and eat it all up?" The girls could not say anything to this because they had eaten the *madagura* as a dainty morsel, leaving the *pinnaru*, who was almost helpless by reason of his increasing weakness, to the sole care of his daughters. With difficulty the girls brought their father to *Kúmarína*² where he died, from loss of blood.

The blacks say that the colour of the water of this lake is a proof of the death of the *mura-mura*, and that his body is still to be seen there in the form of a great rock, while his spirit is a star, which we identify as Antares.

THE PIRHA AND THE WAPIYA LEGEND OF THE WONKAMALA TRIBE.

When the *Mura-mura Madaputa-tupuru* died, his daughters mourned for him and buried him. Then leaving the neighbourhood of Lake Kumarina, they travelled further north, gathering the "apples" of the *Malka* tree³ by the way, some of which they roasted, and carried the remainder with them in their bags.

After a long march they reached the *Ukaralya* creek,⁴ on the opposite bank of which they saw the *Wapiya* girls.⁵ They greeted each other across the creek as *kumi* and questioned each other about this and that.

"What do you eat?" said the *Wapiya* girls, to which the others replied, "*Turutudu*. And what do you eat?"⁶ Then they asked about their respective *mura*⁷ or sacred songs, and the *Mankara-waka ya pirna* said theirs was the *Pirha*, while the other girls said that theirs was the *Wapiya*. Then being still separated by the creek, they gave a representation of their respective songs, the *Mannkara-pirna* singing their *pirha* song, while the other girls beat time with two boomerangs. Then the *Wapiya* girls asked how they intended to cross the creek, and the others said, "We will dance straight across." This they did, and landed on the opposite bank, where they abandoned their language and took that of the *Wapiya* girls, their future fellow travellers, the *Wonkamala*.

Then the whole group of girls dancing together, wandered further to the

¹ *Madagura* is a small marsupial, and *yidli-yidli* is "fat fat," that is "very fat."

² *Kumari* is blood.

³ The *malka* is the *Mulga*, which is *Acacia aneura*.

⁴ *Ukaralya* means girls, in the Dieri language *mankara*.

⁵ *Wapiya* is boomerang.

⁶ In the *Wonkamala* this is "*munukudu takatji ngana tadjiri*?" or in the Dieri "*Munukudu ngaiani tayii*?" *Munukudu* is a plant with grass-like foliage and bearing tubers, which are not in clusters but underneath each other. The plant grows on the sandhills, under the bushes.

⁷ *Mura* is something hallowed or sacred, as, for instance, a tree under which, according to some legends, a *Mura-mura* slept.

north. Their way led them to Paridikadi,¹ where they were bitten by ants, and then to Lakuramantji,² and finally to Wilpukudiangu,³ where they thought they saw some *duntji*⁴ at a distance. Hastening forward to tear it up, they found on coming nearer that the supposed bush was a very old bald-headed man, whose long straggling beard, blown by the wind, gave him the appearance of a bush of *duntji*. Laughing at his appearance, and at their mistake, they went on, and in the well wooded Ngamara⁵ found much gum, which they gathered in their *pirhas* and mixing water with it, drank it, enjoying its sweet flavour. Having filled their bags with this gum, they went further, till they heard a strange noise in the distance.

"What is that?" they said to each other, but still going on with caution, they came to Paltjura,⁶ a vast sheet of water with high tumbling waves. Their fear was changed into joy, and they hastened forwards and bathed in the waters. Then they followed the shore till they were stopped by a steep hill, which rose up from the water with impassable rocks. Some were for going back, while others were for going on. The former returned homewards meeting with a youth, whom they circumcised. They then sent him to a neighbouring camp to fetch some wood for their fire, but when there, he wished to have access to the women and girls, though his wound was still unhealed. They, being enraged by his immodest behaviour, killed him. The girls waited for some time, but as he did not return, they believed that he was dead and went on their journey. After a time, they came to a place where a number of men had assembled for the Wodampa dance,⁷ who strangled the girls, being enraged because they had seen what it was not lawful for them to see.

Meanwhile the other girls who had not feared the steep hill, danced to it in a line, and the oldest one of them struck it with her *wona*⁸ so that it split, and they all danced through the opening. Having passed through the hill, they came to

¹ Ant path, from *paridaan*, ant, and *kadi*, a way or path.

² The actual meaning is not known to us; all that can be said is that in some way it is connected with the male member of the dog.

³ *Wilpu* is a cord made, for instance, out of the *duntji* or *wilpu* plants. *Wilpu-kudiangu* is to twist a thread or cord.

⁴ The *duntji* plant has a silvery appearance, being one of the *Crotalaria*.

⁵ *Ngamara* is probably the equivalent of the Dieri word *buka-ngandr*, which may be rendered as "bread-mother," in other words, a thick forest.

⁶ *Paltjura* is, in the Wonkamala language, an expanse; in Dieri it is *palara*, as for instance the Lake "*Dakara-wut yuna*" is expanse-long, which would be spoken of as *palara*. According to the statements of our informants, *paltjura* is to be understood as being the Gulf of Carpentaria, a distance of over 500 miles from the Wonkamala country in a straight line. The wanderings recorded in these several legends are mainly in a general north and south direction. Thus, taking those of the *Yuri-ulu* and of the *Mankara-waka-ya-pirna*, the total range is from the country west of Spencer Gulf to the Gulf of Carpentaria.

⁷ The Wodampa dance is the most sacred dance the Wonkamala and the Ngulubulu have. It recounts the origin of mankind.

⁸ A *wona* is the woman's weapon, used also as a throwing stick.

where the old Ankuritcha¹ was sitting by himself in front of his camp, twisting string. They seated themselves in a circle round the old man, who was astonished, and to whom they gave their pet dog Dulderana. Then as he sat listening to them, with his ear turned to the sky, Arawotja, who lives there, let down a long hair cord and drew them up to himself, folding up the cord as he did so, the dog Dulderana being first and the old *pinnaru* Ankuritcha being the last. But one of the girls in climbing up the cord, cut her hand with her *wona*, and let her *pirha* fall. She climbed down to get it, but was not able to climb up again, because the cord had been drawn up out of her reach by Arawotja. Therefore she remained below, and met with two young men who threw their weapons at her. She being covered with shining scales, the weapons glanced off her harmlessly and returned to them. Finally one of them surrounded himself with tree stems, so that he also was invulnerable. Then while the girl endeavoured to strike him with her *wona*, the other youth sprang towards her, and burst her covering of scales with the stem of a tree, so that she was without covering. Then she gave herself up and became his wife.

All that we have been able to learn of Arawotja is that he at one time wandered over the earth, making the deep springs which are to be seen in the otherwise waterless parts of Western Queensland. After he did this, he went up to the sky.

THE ANTIETYA AND THE NGARDUETYA.²

PART I.

This legend consists of three parts. The first and second belong exclusively to the localities Kadri-pairi and Innaminka,³ and are in the Yandruwonta language. The third is in Dieri, but is found also in Yaurorka and Yandruwonta. The songs belonging to this legend are sung at the ceremonies held near Kudna-gauani, and are referred to later on.

Two *Mura-muras* lived together at Kadri-pairi-wilpa, one being a *nardoo* gatherer and the other a hunter, and both were in the relation of *tidnara*.⁴ One day when they returned to their camp at evening with food, the hunter undertook

¹ In spite of long continued enquiry, nothing further has been learned of Ankuritcha or Arawotja.

² *Anti(nganti)* is flesh, and *etya* is recurrence or persistence. *Ngardu*, or as it is usually spelled *nardoo*, is the *Marsilia* sp. on which the explorers Burke and Wills endeavoured to support themselves at Cooper's Creek. *Antietya* is one who eats much game, he who often has to do with game, a hunter.

³ *Kadri-pairi-wilpa* is the milky way, the "river-bed of the sky," *Kairi* being river. *Innaminka*, or properly *Yidni-minka*, means "you (are a) hole," from *yidni*, you, and *minka*, a hole.

⁴ That both could be *tidnara* is to be understood when one considers the peculiar system of relationships of the Dieri. Ego being a Dieri, my mother's mother (*kanini*) is equally my elder sister (*kaku*), so that her son (my mother's brother) is my *tidnara*, for he is my sister's son. In an analogous manner two men may be both *kaka*, that is mother's brother.

to grind the *nardoo*, while the other prepared the game. The latter observed that his *tidnara*, while grinding the *nardoo* ate some of it, and upbraided him for doing so. But as he denied having done it, the other thrust his hand down his throat into his stomach and brought up a lump of *nardoo*, which he then ate himself. Then he ate the remainder of the *nardoo* which his *tidnara* had ground, and finally devoured all the game, so that the other *Mura-mura* had to remain with an empty stomach.

The following morning he considered how he might manage not to be defrauded by his companion. He went out in company with him, but always lagged behind, until at length he saw him disappear over a distant sandhill. He then hastily turned back, and making an immense number of foot-prints as of men, women, and children, went to his camp. There he built up a great number of huts, as if many people had arrived and camped. Then he set to work to grind *paua*,¹ which he had gathered on his way back, but when he began to grind it, the stone broke, and he sought another, but it also broke. Then he took his shoulder blade and smoothed it into a *ngurtu*,² and cutting off the point of his tongue he used it as a *marda-kuparu*³ to grind with. He placed the larger stone over a hole in the ground, in which he had placed a *pirha*, and dropping the seed on the stone, he ground it with the other and let the meal fall into the bowl below.

In the evening, when the other *Mura-mura* returned, he observed the numerous footprints and following them, saw at his camp a great number of new huts, and was much frightened, thinking that his *tidnara* must have been killed. Weary and sad he lay down and slept, but was awakened by the noise of a great rushing wind. Again he slept, and again he was aroused by it, but at length, overcome by weariness, he slept till morning.

The other *Mura-mura* had ground a mass of *paua* and baked a number of cakes of it. He then threw one cake after the other, towards the hut of his *tidnara*, so that a complete path was made. At daybreak the latter was wakened by the smell of the newly baked cakes. He collected them one after the other, until he saw where his *tidnara*, whom he did not recognize, was sitting on the *ngurtu*, which he had placed on the ground. He then walked round the hut, till recognizing his *tidnara*, he rushed to him and embraced him, shaking him in his joy till both of them with the *ngurtu* sank into the ground. Then they came out again, and one said to the other, "Where do you wish that I should go to?" "That way," said the other, pointing in a certain direction. He went that way and the other sent him still further, until when he had gone a long distance, he said to him, "Remain." Then in the same manner the latter sent the former to a distant place.

¹ *Paua* is the seed of any food plant.

² *Ngurtu* is a large slab of stone on which the *paua* or *nardoo* is ground.

³ *Marda-kuparu* is a smaller and harder stone, with which the seeds are ground upon the *ngurtu*. It is named from *marda*, a stone, and *kuparu*, young, thus the young of the stone, a small stone.

PART II.

Antietya lived at Kadri-pairi, but Ngaduetya remained at Innamincka the rest of his life. Long after that time strangers came to the place and found the bones of the *Mura-mura* Naduetya. They collected them, placed them in a *billi-milki*,¹ and put it up in the branches of a tree, covered with leaves. In time many people settled there, but they sickened and a great number died. In this emergency a *pinnaru* sent his wife² out to call the people together, from all quarters, to hold a great ceremony to put a stop to the mortality. They came from all round, and decorating themselves with emu and *katatara*³ feathers, the ceremonies commenced. The bag, containing the bones of the dead *Mura-mura*, was taken down from the tree, and two of the *pinnarus* danced. Then they took the backbone of the deceased, and each wound a piece of cord about it. Two other people, a man and his wife, also wound the cord once each round the bone. Then all the people did likewise, in pairs, until the bone was quite hidden from sight.⁴ Having thus strengthened the backbone of the *Mura-mura*, they were now protected from the sickness.

PART III.

While Ngarduetja went to Innamincka in the east, Antietja lived at Kadri-pairi. The *nidla*⁵ and *punta*⁶ were his food, and there were such numbers of the *kauri*⁷ there that he could hardly protect himself from them. One day when a fierce hot wind blew and there was a sandstorm, trees were broken and twigs were carried by the wind, and one of these struck the *Mura-mura* on the face. When the storm was over, he looked round to see where the tree was from which it had been carried. He observed it in the far distance, and hastened towards it. After a time, he arrived where it stood at Nyúlin-yaníra.⁸ He determined to uproot it, and rubbing it with the sweat of his armpits, lifted it slightly up. Again rubbing the sweat into the butt of the tree, he seized it and, as if by itself, it rose out of the ground, roots and all. He freed it from its roots and branches, removed the bark

¹ This is a bag, *billi* or *pili*, *milki* is the eye. There are marks called "eyes" worked on this kind of bag, which is thereby distinguished from another kind without "eyes" and of a different texture.

² Women are even still employed as messengers, especially in the Mindari ceremonies. In cases where it is supposed that some man has been killed "by the bone," a woman is sent to the supposed culprit, and is expected to obtain, by her favours, the knowledge of where the bone is hidden, or even to obtain it.

³ The Budjerigar.

⁴ When this ceremony is held at Innamincka, small staves thickly wound round with string are used to represent the backbone of the *Mura-mura*.

⁵ and ⁶ Small marsupials.

⁷ A migratory rat which has not been identified by us.

⁸ At Farrar's Creek about 150 miles from Kadri-pairi.

and carried the trunk on his shoulders back to Kadri-pairi, where he pointed the upper end and made it into a *туру-kuntji*.¹ In the night the rats came in such numbers that they destroyed his camp, and prevented him from even lying down, so that he sat the whole night, holding the *туру-kuntji* before him. The next morning he went hunting *kauri*, following their footprints to the hiding-places in which they had concealed themselves at daybreak. Thrusting his *туру-kuntji* into a hole, he twisted it about and thought that he heard a sound of scratching at the other end of the burrow. Then as the rats came out, he killed and collected them in three great heaps. At last one *kapita* came out, which he caught by the neck instead of by the tail, and it bit him in the finger. Then he let it go and he saw it escape into another hole. The blood having stopped, and the pain abated, he returned to the three heaps of rats, but did not roast them, because by doing so he would lose all the fat. He therefore, swallowed them raw, one after the other. Then he suddenly became aware that a tail was growing out of him, longer and longer, until the end of it stuck into one of his eyes and blinded him. For three days he remained sightless, until a film came off his eyes and he could see that his whole body was coloured like a rainbow. Then he sought for a shelter to live in and coming to a suitable sandhill, he said to himself, "Shall I live upon the top of it, where people might be afraid of me, or shall I make a cave in it?" Then he made a cave in the sandhill and lived therein. Meanwhile a man came there who was a hunter of birds, and Antietya told him to take emu feathers and other things and carry them to the *Mura-mura* Andrutampana,² who lived further to the north. He was to tell him that, after the death of Antietya, the *yenku* (son's son) of the former should have these things and should bring down the sacred song of Andrutampana to be joined with that of the *Mura-mura* Minkani. Thus it happened that, while the *Mura-mura* Minkani Antietya burrowed in his sandhill at Kudna-ngauana³ deeper and deeper, the man carried the presents and the song to the *Mura-mura* Andrutampana, and since that time the two songs have been combined in the same ceremonies.

The legend clearly identifies Antietya with the *Mura-mura* Minkani, whose ceremonies are held periodically by the Dieri, Yaurorka, Yandruwonta, Marunga (Marula), Yelyuyendi, Karanguru and Ngameni at Kudna-ngauana, on Cooper's Creek. All that we have been able to learn so far as to the ceremonies is as follows:—

The object of the meeting of the tribes is to obtain a plentiful crop of *woma* and *kapiri* by the ceremonies.

The *Mura-mura* Minkani, as mentioned in the legend, is concealed in his cave deep in a sandhill. To judge from the description given, his remains seem to be

¹ This implement is usually made out of the root of the *Mulga* tree, and is used for digging the *kauri* and other small animals out of their burrows.

² The meaning of this name has not been ascertained, nor have we been able to learn the legend relating to him.

³ From *kudna*, excrement, and *ngaua*, light.

one of those fossil animals which are found in the deltas of the rivers which empty themselves into Lake Eyre and which are called by the Dieri *Kadimarkara* (p. 127).

When the actual ceremony takes place, the women are left at the camp and the men proceed alone to the place where the *Mura-mura* is to be uncovered. They dig down till damp earth is reached, and also what they call the excrement of the *Mura-mura*. The digging is then very carefully done, until, as the Dieri state, the "elbow of the *Mura-mura*" is uncovered. Then two men stand over him and the vein of the arm of each being opened, the blood is allowed to fall upon the *Mura-mura*. The Minkani song is now sung, and the men, in a state of frenzy strike at each other with weapons until they reach the camp distant about a mile. The women who have come out to meet them rush forward with loud outcries, and hold shields over their husbands to protect them, and stop the fighting. The *tidnamadukas* (p. 114) collect the blood dropping from their wounds, and scatter it mixed with "excrement" from the Minkani's cave, over the sandhills, so that they may give forth the young *woma* and *kapiri* hidden in them.

This ceremony is undoubtedly similar to the Intichiuma ceremonies by the men of the Kangaroo totem, described by Spencer and Gillen,¹ and the intention is the same, namely, to produce a crop of the totem food-animal. In this case the men who assemble for this purpose should be, according to all similar practices, of the totem animal which they intend to produce, therefore of the *woma* and *kapiri murdus*. This, however, we have yet to ascertain.

THE DARANA LEGEND OF THE DIERI TRIBE.

This is one of those which relate to the production of rain, and the *Mura-mura* Darana is one of the most highly considered of the *Mura-muras* at Pando (Lake Hope).

When no rain had fallen for a long time, and the land was desert and waste, Darana produced rain by singing continually, while looking towards the north.² The rain fell and the water rose steadily till it was up to his knees, then to his hips, and finally to his neck. He waded through the waters to the sources of the river, where he fixed his *kandri* in the ground, and the rain ceased. Then vegetation grew luxuriantly, and the *muluru*³ settled themselves in it in enormous numbers. The *Mura-mura* drove them together by his songs, dried them and packed them in bags, and hung these on the trees. Being invited by a friendly *Mura-mura* to visit him and eat *paua* he went with all his following, among whom were a number of cripples, who travelled along on their knees, elbows and ankles. Two youths, however, the *Dara-ulu*,⁴ remained behind, and seeing the bundles

¹ *Op. cit.*, p. 171.

² The great rains come from that quarter.

³ *Muluru* are grubs or larvæ, commonly called by the whites living in the north "witchety."

⁴ *Dara* means desert.

hanging on trees, threw their boomerangs at them. He who stood on the right hand hit his mark, and the dust from the dried *muluru* flew far and wide and obscured the sun, while the bags shone brightly to a great distance. The *Mura-muras* seeing this as they travelled, turned back in haste, those with feet running on the surface, while those without travelled underground. Arriving at their home they strangled the *Dara-ulu*, who were at once restored to life by the old *Mura-mura* Darana, to be again strangled by the unanimous decision of the people. Their bodies were then rolled up, and it was decided that the first child born should be the guardian of the *Dara*.

The Dieri show two heart-shaped stones, which are carefully wrapped up in feathers and fat, as the *Dara-ulu*, to scratch which would, they say, cause the whole people to suffer perpetual hunger, and never to be satisfied however much they might eat. If these stones were broken, the sky would redden, the dust which formerly rose up from the dried *muluru* would spread itself from the westward, and men, when they saw it cover the whole earth, would die of terror.

The *Dara-ulu* are believed to be the senders of rain, and in the rain-making ceremonies these stones, which represent them, are smeared with fat, and the *Dara* song¹ is sung, the commencement of which is as follows:—

Warpi pirná yellá-yellá
The warpi the great together together
(tightly bound together)

woná pitt tankára yellá
the cords ends crossed together

Ngamaltí bakú ngamaltí wiltji ngamá mirádmurriyelli
With the breasts of the free, with the breasts of the moving breasts with rapid

Warumbara kuyu mani tidna wiri-wiri wora kupa
(* * * * *)

Ngungá tunká nungá tunká, tapáyuri
The arm (wing) shows itself, of the *tapayuru*.²

THE MURA-MURA PALUNGOPINA² ASCENDS TO THE SKY. A LEGEND OF THE TIRARI BRANCH OF THE DIERI TRIBE.

Two young men outraged a young woman, who then gave water to her husband with a splinter of wood in it, as a sign of what they had done. He poured

¹ The *Dara* song is of great length, and as the version obtained is in the Yaurorka language, it has not yet been completely worked out. The commencement is given as an example. *Warpi* is a kind of covering for the arm, ornamented with *tunku*, a cotton-like substance, and is tied on with a hair cord crossed over the arm. By the movements to which the song is sung, the arm covering simulates the waving of the wings of the rain-bringing *tapayuru*, which is a bat. The meaning of the line beginning "*Warumbara*" has not been yet made out. The whole song will be prepared by Mr. Siebert at some future time.—A. W. H.

² The meaning of this name is not known, but *palu* means naked.

out the water with the splinter in it on the ground, and all the people agreed that the young men should be strangled. This was done, but they revived and were again strangled, the ground being coloured with the blood which flowed from their noses and mouths. The place where this happened is called Midla-kumari.¹ There were a great number of people there, who, by the order of the *Mura-mura*, Palungopina, dug an immensely long and deep grave, in which the young men were laid, and this was where the lake Tauian-ngaritiangu, now is. Palungopina then ordered the earth to fall in, and thereby all the people who were there were swallowed up in it. He then ordered them all to rise up in the form of *miri-wiri*,² which flew up with wings to the sky, and Palungopina followed them. This was at Padiminka.³

The Tirari and Dieri believe that they will themselves go up to the sky from a place called Palkara-karani.⁴

KÁKAKUDANA⁵ AND THE ORIGIN OF THE MOUND SPRINGS. A LEGEND OF THE URABUNA TRIBE.

This legend professes to account for the origin of the fossilized marsupials and other creatures which are found in several places in the Lake Eyre district, and also for that of the Mound springs which are a marked feature of that part of Australia. These fossils are called by the tribes people *Kadimarkara*, creatures which, in the *Mura-mura* times, descended from the sky country to the earth, by means of great trees which grew on the eastern shores of Lake Eyre and which supported the sky.

Kadimarkaras are also spoken of as *womas* of huge size. In some way the *Mura-mura* Minkani is also regarded as being a *Kadimarkara*, and in this legend of Kakakudana the *kadimarkara* is spoken of as being a *woma*.

Kakakudana lived to the west of Lake Eyre. Leaving his wife behind, he went on his wanderings alone. At Pitalina⁶ he dug after a *Kadimarkara*, which he killed in the ground, and then dragged to Womadirkana,⁷ where he cooked it in a *dirka* and ate it. The places where he killed the *kadimarkara* and where he ate it are marked by springs. He cut off its head and threw it away, which caused the hill called Woma-kata-yapu to rise up.⁸ Having eaten the flesh of the *Kadimarkara*, he collected the bones for his wife, and took them back to her. While she was busy pounding the bones in her lap, he went off again, in the belief that she would follow him. Looking round when he got to Wilpandrana,⁹ he could not see her and therefore whistled for her to come, but she did not hear him, and not knowing where he was, she wandered round looking for him.

¹ *Midla* is nose and *kumari* is blood.

² *Miri-wiri* means maggots.

³ *Padi* means grub and *minka* is hole.

⁴ This name means "climb up in the darkness."

⁵ The meaning of *Kakakudana* is not known, but *kudana* is to lie down.

⁶ From the Urabuna word *pitanda*, to strike, in the Dieri, *nandrana*.

⁷ *Dirka* is a hole in the ground heated by a fire, in which *womas* (carpet snakes) are cooked. *Womadirkana* is the mound spring called Blanche Cup.

⁸ From *Woma* and *katayapu*, a head.

⁹ From *wilpandra*, to whistle, in Dieri, *wilpina*.

Wearied by searching for him, and sad, she rested at Wolkararana,¹ and they wandered on to Wulyua-purali,² where she died.

Kakakudana noticed that his body continued to swell larger and larger. He had all the inhabitants of the surrounding country brought to him, even the weak, the sick, and the women with child. When they were all gathered together at Kudnangampana,³ his enormous body burst and all the people ran away affrighted. At this place as at all other places where Kakakudana or his wife rested there rose up a spring.

These legends show clearly that the *Mura-muras* are believed to have been men, women, and children, resembling the present race in person, in thought, and in custom, but with the difference that all of them possessed supernatural and magical powers, which are scarcely equalled by the powers which the medicinemen of the present time, in the Lake Eyre tribes, profess to have.

The legends describe several stages of culture and of primitive custom. First the formation of the present race, either by the *Mura-muras* perfecting imperfectly formed beings, or by the transformation of imperfectly formed *murdu*s, that is, totem animals. Another stage is the establishment of the rites of circumcision and subincision by the *Mura-muras*, and the introduction of the use of the stone knife in the former rite instead of the fire-stick. The legends record their wanderings, far and wide, not only in Central Australia, but also from sea to sea, and the naming of various places from the incidents of travel or the natural phenomena observed.

Another stage of culture is also indicated in connection with the ceremonies which took place in the *Mura-mura* times, namely, the establishment of magical ceremonies, with sacred songs and dances, for the purpose of increasing the food supply. Finally a stage is reached by the adoption of the *murdu* regulations, as they now exist. A difficulty may, however, be felt in regard to this matter, because marriage of some kind existed, according to the legends, while two legends, now to be referred to, seem to infer that totemic marriage was only instituted in later times.

THE MARDU (MURDU) LEGEND.

These legends of the institution of totemic marriage require special consideration, because, as before stated, doubt has arisen as to how far Mr. Gason's *murdu* legend can be accepted as actually representing the Dieri belief. The passage referred to is as follows:—

“After the creation, brothers, sisters, and others of the closest kin intermarried promiscuously, until the evil effects of these alliances becoming manifest, a council

¹ From the Urabuna word *wolkardiatyinda* meaning longing for, in Dieri, *wolkarali*. This is the Anna Springs.

² *Wulyula-purali* is “old woman dead.” *Wulyula*, in the Dieri *widlapirna*, being old woman, *purali* means to die.

³ The stomach. The Urabuna word is derived from *kudna*, excrement, and *ngampa*, the bone with which they pound *nardoo*. The Dieri call the stomach *kudna-ngandri*, the excrement-mother.

of the chiefs was assembled to consider in what way they might be averted. The result of their deliberations being a petition to the *Mura-mura* 'good spirit,' in answer to which he ordered that the tribe should be divided into branches and distinguished one from another by different names, after objects animate and inanimate."

It is much to be regretted that Mr. Gason did not give his legend, as we have endeavoured to give ours, as much as possible in the words of the narrator, rather than in the above Anglicised version. We have, however, a Dieri legend, which may be a version of Mr. Gason's.¹

It is as follows:—"The several families of *madus* married in themselves without shame. This occasioned great confusion, and sexual disorder became prevalent. The *Pinnarus* (elders) observing this came together, to consider how these evils might be avoided. They agreed that families should be divided; that is, members of one family should marry those of another family." In accordance with this it was ordered that "*Yidni padi madu wapanai kaualka kuraterila, yidni kaualka wapanai warukati kuraterila, etc.,*" that is to say, "thou grub totem go to produce crow; thou crow totem go to produce emu," and so on for the other totems.

According to the Perigundi legend the *murdu*s originated as imperfectly formed animals, which then became human, while according to the Paralina legend, man was originally perfected from some imperfectly formed beings. According to another legend *Mandra-mankana* gave to each of those people who escaped being swallowed up by him, a *murdu* as he ran away.

Although these legends do not agree as to the manner in which the *murdu*s originated, one thing seems clear as to the beliefs, namely, that it was in the *Mura-mura* times, and not in the later time of the present race, as seems to be inferred from Mr. Gason's legend. It seems clear to us that as the *murdu*s existed in the times of the *Mura-muras*, they were not established for the purpose of regulating marriage. In this aspect the Gason and Siebert legends may be contrasted as they differ materially. The former says that the *murdu*s were established for the purpose of regulating marriage, while the latter says that the *murdu* families existed, but married within themselves, and that the evils which arose therefrom were avoided by establishing what was in fact exogamy. Therefore marriage pre-existed, but was regulated, not by the order of a *Mura-mura* "good spirit," but by the *pinnarus*, or as Mr. Gason calls them, "chiefs," by their own will. If we accept this as having been done in the *Mura-mura* times, both legends are to a certain extent reconciled, for the *pinnarus* were the *mura-muras*, and the introduction of a *Mura-mura* as the "good spirit" is not necessary.

It seems to us that this view not only falls into line with the general conclusions as to the beliefs of the Lake Eyre tribes, which we have drawn from the legends, and as to the sequence of the several stages of their social evolution, but also with conclusions, drawn by Spencer and Gillen from the analogous legends of the Arunta tribe.

¹ *The Dieyeri Tribe*, p. 13. Cox, Adelaide, 1874.

NOTES ON THE KIKUYU AND KAMBA TRIBES OF BRITISH EAST AFRICA.

BY H. R. TATE.

[WITH PLATES II-V.]

THE AKIKUYU.¹

THE following notes which I have made on the Kikuyu tribe have been collected in the Kenya Province of the East Africa Protectorate, and I propose to describe

briefly the geographical conditions of this part of the world before proceeding to a description of the people themselves and their mode of dress.

The Kenya Province comprises roughly all the highlands within a radius of fifty miles around Mount Kenya, and is bounded on the west by the Laikipia Escarpment, which runs as far south as Engijabi Hill, where it joins the Kikuyu Escarpment. Although the northern boundary of the Province is as yet undefined, the Kikuyu tribe is not found in any numbers north of the equator or east of longitude

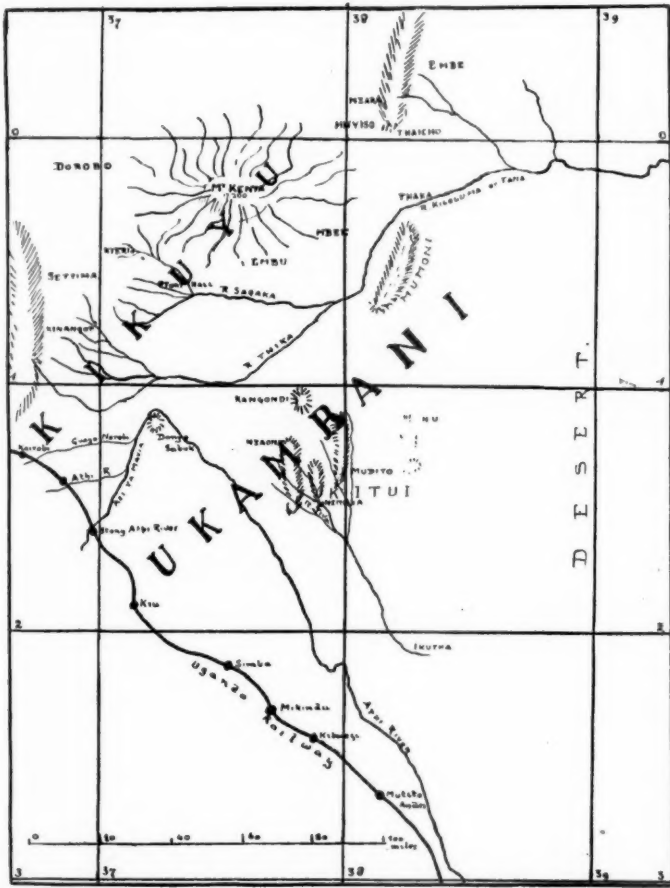


FIG. 1.—MAP SHOWING DISTRIBUTION OF KIKUYU AND UKAMBANI ;
BRITISH EAST AFRICA.

38° E., while their southern range may be taken as bounded by the Nairobi river, which separates the Kikuyu country proper from Masailand.

¹ Mukikuyu = a Kikuyu man. Akikuyu = Kikuyu people.

In studying native life it is generally found that, to a large extent, the country in which he lives moulds the character and habits of the man. It will not be amiss, therefore, to describe the country and products of the Akikuyu and show to what extent the latter have been influenced by their surroundings and climate.

From Mount Kenya itself can be traced the extreme fertility of the Province to which it gives its name. From its snowfields and glaciers arise the numerous rivers and streams which water so abundantly the valleys and plains lying around its far-reaching spurs. Its white-capped peaks can be seen from at least one hundred miles on every side and constantly remind the traveller that, although very little south of the equator, he is also within sight of the third highest mountain in Africa, whose 17,200 feet are only surpassed by the great Kilima Njaro and the comparatively unknown Ruwenzori. The whole of the Kikuyu country is composed of highlands; Fort Hall, the headquarters of the Kenya Province, being situated at an elevation of over 4,000 feet, while Fort Smith, the old Government station on the edge of the Masai country, which is now abandoned, was built on a site 6,400 feet above sea level. The cool and bracing highlands of Kenya breed an active, sturdy native, who is a thrifty agriculturist and knows well how to utilize the rich, red soil of his country. The Akikuyu almost invariably build their villages on hill-tops and hill-sides where a good view of the surrounding country may be obtained and an approaching enemy seen from a distance. The terror inspired by raids of the Masai warriors in the past has implanted in them this act of caution to such an extent that it is now second nature, and a Kikuyu colony building their villages on a new site and in a locality perfectly free from the Masai, always select a high position on which to build, even though it may necessitate fetching the necessaries of life, such as water and firewood, from a long distance.

The Masai, on the other hand, build their *manyata*, or kraals, on some slightly elevated spot in the middle of a big plain where their herds of cattle can be easily pastured and for the most part visible from the kraal, since the young boys act as herdsmen and would be of small use in defending their charges against the raid of an enemy, armed as they are merely with a small bow and arrows.

The mountainous country in which the Akikuyu live has given them a slightly stooping carriage and bowed though muscular legs, which contrast disadvantageously with the perfectly moulded thigh and calf of the Masai. The fruitfulness of their fields have made them almost exclusively vegetarians and deprived them largely of that love of hunting which is so strong in the Dorobo, and to a lesser degree in the Akamba, whose country is not nearly so fertile as Kenya.

The Kikuyu is pre-eminently a suspicious native. Having been in the past constantly on the look-out for the Masai he has become distrustful of others, and regards Europeans askance at the first introduction, although he may get to know

afterwards that their friendship is sincere. From being distrustful he has become treacherous, possibly with the idea of being first in the field in case others have sinister designs against him. Having been generally worsted in his fights with the Masai, he has lost any feeling of over-weening confidence in his own prowess, a state of mind which is exclusively the property of the Masai, and is of opinion, like many other natives, that discretion is the better part of valour. Nevertheless he is a formidable adversary whose power of resistance in his own country it would be very unwise to underestimate.

The Akikuyu are hard-working, thrifty, and above all moral, and their place in the future of East Africa is already assured, if only from the fact that they are extraordinarily prolific and possess recuperative faculties as a tribe which make them quite inextinguishable. They cultivate their fields with unusual care for African natives, and greatly excel the Akamba and people of Teita in this respect. The soil of the highlands is a rich one, and as the rainfall of the two wet seasons, which cover a period of about eight months, amounts to between 40 and 50 inches, the crops are successful year in and year out and produce a surplus for sale and exchange. The home-grown diet of the Kikuyu is extremely varied as compared with that of other East African tribes. Maize, millet, and tree beans grow profusely in Kenya, as do also Kaffir corn and three kinds of ground beans, called by the Akikuyu *mbosho*, *njari*, and *njoroko*, and a choice of roots may be made among sweet potatoes, yams, and manioc, while bananas and sugar cane grow luxuriantly in all cultivated valleys, the former showing little or no inferiority to coast-grown fruit. The Akikuyu have but few cattle, and though every elder has a few sheep and goats, he seldom eats them, but uses them as a means of purchasing his wives or settling such claims as blood money and tribal fines.

Physical Type.

The Akikuyu, whose language is one of the great Bantu family of East Africa, south of the equator, are a well-built people of the negroid, prognathous, type of countenance with a smooth, dark reddish-brown skin.

In face they are markedly platyprosopic, their front being as a rule broad and flat, the cheek bones prominent, and the nose short and wide at the base, as in all negroid tribes. The lips are of medium thickness and slightly everted, and the mouth and chin broad. Between the upper incisors a slight aperture is filed, and both the lower incisors are sometimes knocked out. The eyes are almond-shaped and dark brown and are set somewhat obliquely under the eyebrows, the eyelashes being rather noticeably long. In body the Akikuyu are slenderly built, the arms being even slim and delicately moulded, and the fingers long and tapering. The legs, from the knee downward, are generally slightly bowed; the foot is small, well-built and has a well-marked instep. Viewed sidewise, the Kikuyu youth appears slightly inclined to steatopygy, but to nothing like the extent that is found among the Kaffirs. Owing to the women doing the majority of the manual work and becoming mothers at an early age, they soon lose the sprightliness of youth and in

face and figure exhibit premature old age, while the men retain an upright form, springy step, and unimpaired courage right into middle age. Women retain a circular patch of hair round the back of their head and shave the hair over the forehead, above the ears, and around the neck. Elders either wear their hair short all over their head, or wear a small cap made of the entrails of a sheep. Circumcision is compulsory for both boys and girls after reaching the age of puberty, and is attended by dances and various ceremonies into which want of space will not allow me to go.

The various stages of the life of a Kikuyu are as follows:—A male child is called *kahé* until he has been circumcised, when he is known as a *mwanake*. This name he bears until he is recognized by the government and the elders themselves as of sufficient age to become an elder, when he becomes known as a *mundu mzuri*. A female child is called a *karegu*, and bears this name until she has been circumcised; afterwards she is known as a *mwiretu*, and does not change her status until after marriage, when she becomes a *muhiki*. A woman is known as a *mutumia* after the birth of her first child.

Clothing.

Prior to contact with civilization, the male Kikuyu wears a small garment of goat skin tied over his right shoulder and descending to just below the groin. This is called a *kizii*, and is generally changed for a blanket by the older men as soon as traders bring trade goods into the country. Some of the young men wear an oval piece of goat skin over the buttocks in imitation of the Masai warriors. This depends from the waist, hair outwards, is sometimes ornamented with beads, and is called an *ndawa*. Akikuyu youths, who have access to a bazaar, invariably wear a small piece of Americani (cloth sheeting) the size of the *kizii*, which is daubed with mutton fat and red clay, the edge being generally sewn with small white beads. The women wear three garments all made of goat or ox skin. First, a sort of cloak tied around the shoulders and hanging down below the waist. This is open in front and leaves the arms free for work. It is called a *zetu*, and is only worn by married women. A kind of skirt, called *musuru*, is worn round the loins and reaches nearly to the ground behind, and a small apron (*mavengo*), acting as the tongue of a shoe, is worn under the opening of the *musuru* in front. The clothes both of men and women are made by the men. They are sewn together with thread, made from the sinews of the back of a bullock, by means of an iron needle which is beaten out by skilled workmen from the iron ore found plentifully throughout Kikuyu. The needle has no eye, but is used to punch a hole through which the thread is passed. On the death of the wearer, the clothes are thrown away and never worn again. Big medicine men sometimes wear a leopard or lion's skin as a sign of their profession. The small skin caps worn by some elders are tied under the chin, cover the ears, and come down to the nape of the neck. They are generally fringed with small white beads.

Personal Ornaments.

The young men allow their hair to grow to a length of 3 or 4 inches, when it assumes the appearance of small fillets, and is profusely greased with mutton fat and daubed with red clay which runs down over the neck and shoulders as far as the chest. The uniform length of the hair over the forehead presents a fringe-like aspect, but during running or any other action requiring unusual energy, the head assumes the appearance of a tumbled shock and considerably alters the looks of the wearer. Young dandies wear a tuft of feathers of the *corvus semitorquatus*, (called *nderi* by the Akikuyu), on the top of the head; these are cut short to the length of the hair and are smeared with fat and clay. Some of the elders shave the hair above the forehead and ears and around the neck, but this is not a frequent practice. Young unmarried women shave all the head with the exception of a very small patch on the apex, on which they sometimes fix a small portion of a bullock's shoulder bone. When a woman's child has been circumcised she may shave her whole head.

As a rule the Akikuyu do not wear beards or moustaches, but pluck out the hairs one by one with a pair of tweezers which, in common with the Akamba, they invariably carry at the end of a chain slung around their neck. A beard or moustache, if worn, is allowed to grow naturally and is not trimmed in any way. The ears of a full-grown man or married woman are heavily loaded with all sorts of ornaments, principally small hoops of red beads which are attached to the top of the ear and pull it right down over the orifice. The lobe of the ear is cut and stretched, and some heavy ornament, such as small hanging chains or heavy hoops of pink or red beads, depend therefrom. Frequently one or more strings of beads are threaded through these hoops and tied behind the neck like a necklace. A circular wooden disc is often inserted by both sexes in the lobe of the ear. Young men pierce four or five holes in the upper edges of the ears into which small sticks about an inch and half long, are inserted. These are taken out and replaced by circles of beads or iron rings later on in life. The young unmarried women wear beads in the upper parts of their ears and small sticks in the lobe, but a married woman, as soon as her first child has been circumcised, discards these sticks for hoops of beads. Many women imitate the Masai in wearing a huge coil of iron wire around their neck, and all girls and married women wear as many necklaces of beads as the generosity of their lovers or the wealth of their husbands will allow. Blue seems to be the favourite colour with the fair sex in this form of ornamentation.

Akikuyu young men wear brass and copper wire coiled around the arms between the shoulder and the elbow and around the wrists; around the legs between the knee and calf and around the ankle. These ornaments are not removed except in the case of a fracture of a limb. Iron rings are worn both on the first and second joints of the fingers; sometimes the upper part consists of a narrow, drawn out plate which reaches from finger nail to knuckle, and is roughly ornamented with small dents somewhat resembling the head of a thimble. Young men are allowed to wear ornaments as soon as they have been circumcised.

Women as a rule do not affect heavy leg or arm ornaments, but generally wear a belt or double string of beads around the waist above the *musuru*. This belt is often composed of skin closely covered with different coloured beads worked in various patterns.

Tribal Subdivisions.

The following are the tribal sub-divisions of the Akikuyu :—

Achera	Njirru	Athiageni	Ezuga	Aichakamuyu
Agachiko	Agathigia	Aithekahuno	Angari	Mbui

THE AKAMBA.

The Kitui District of Ukambani, in which I have collected the following notes, comprises all the country lying between the Athi and Tana Rivers, and is bounded on the east by the 39° of longitude east and on the west by a straight line, drawn from the junction of the Thika River with the Tana, to the Donyo Sabuk Hill.

The Kamba tribe are also thickly settled over the whole of the Ulu District, which lies within the triangular loop of the Athi River, but are not found in any numbers south of the Uganda Railway in its route from Kibwezi to the Athi River Station. The country is on the whole dry, and, in the north-west corner of the Ulu District, fairly healthy, but both Kitui and Ulu suffered terribly from the famine of 1898 and 1899, when fifty per cent. of the Akamba are estimated to have died, despite the efforts of many Government Famine Camps and the untiring work of missionaries, aided by subscriptions from a private source in the British Isles. During this time many Akamba migrated to the Kikuyu country, where they stayed until 1900, selling cattle, and leaving their children in payment of food, to be afterwards redeemed when better days came round. The Akamba, despite the fact that they possess considerable herds of cattle, sheep, and goats, are primarily agriculturists, and will not part with their treasured herds except when driven to desperation by hunger. Many of them died of starvation, leaving their livestock to their children, sooner than kill what would have saved their lives.

The District of Kitui, though dry and fairly high lying, is unhealthy right through its length and breadth, and even the Akamba themselves suffer considerably from malaria. The Swahili and Masai say that it is the fever-laden east wind which brings malaria to Kitui, but doctors point to the presence of the *Anopheles* mosquito in all the small pools in Ukambani, and to them is probably traceable the prevalence of this form of illness throughout Kitui. The rich, red soil needs but sufficient rains to smile with abundant harvest, but it must be confessed that the natives do not back up the fertility of their country by good cultivation, their superficial scratching of the soil being, as in the case of many other African tribes, too often a contributory cause of partial and even total failure of their crops. I have grown a splendid crop of maize in my own garden on more than one occasion, when a partial failure of this cereal among the natives was general throughout Kitui. The Akamba scatter their villages broadcast over the country side, the *Pax Britannica* of the last six years having taught them that they have no longer

anything to fear from the formerly dreaded Masai, on account of whose raids they used, in the old days, to conceal their huts in the bush in so cunning a manner that it took considerable practice to find out these clever hiding places. In the same way the thorn fence which formerly surrounded their villages, to which entrance was effected through a narrow tunnel of tree trunks, has been almost invariably discarded throughout Ukambani. The Kamba native hut is built in a circle of about 8 feet diameter, of slender sticks stuck into the ground, the whole reaching a point at the apex through which runs a centre pole of stout wood. The outside is loosely thatched and affords ingress through a small door about $2\frac{1}{2}$ feet high.

Ukambani, or the country of the Akamba, attains in no part the altitude of the Kikuyu highlands, plains and low plateaux alternating with small hill ranges and deeply cut ravines. The Akamba, like the Akikuyu, avoid the plains, and build their villages along the shallow valleys and far-reaching spurs which run down from the hill ranges. The Akamba are not exclusively vegetarians. Although they seldom kill meat for ordinary purposes, they readily devour the flesh of cattle or goats which have died a natural death, and in time of famine and during the dry season make up large hunting parties, when many hippopotami and not a few elephants fall under their spears and poisoned arrows. At these times their food is meat only. During the famine of 1898 and 1899 a few cases of cannibalism occurred in the Kitui and Ulu Districts.

The Akamba are not naturally suspicious and distrustful of strangers like the Akikuyu, neither do they in any way approach the latter in treachery.

In the old days when the Masai raided the whole of Ukambani, the Akamba frequently stood up to the bullying warriors to such good effect that the latter were often beaten off, and what loot they had already driven off taken away from them. Raiding among themselves has always been, and still is, a favourite occupation of the Akamba, and the Ulu chief, Mwatu, who is now a very old man, had a reputation as leader of war parties, ten years ago, second to no other chief in the Protectorate, while he is credited with having worsted the Masai in at least one encounter. Fighting is carried on almost exclusively with bows and arrows, which are smeared with a very deadly poison obtained from the bark of a tree, the name of which they will not divulge to Europeans. Spears are not much used, in which respect the Akamba differ from Kikuyu modes of warfare wherein the short, leaf-shaped thrusting spear plays an important and effective part.

The chief fault in the character of the Akambi is their incorrigible idleness and proneness to drunkenness after reaching the later years of manhood. As among nearly all African tribes, the women do all the work in the fields and are also hewers of wood and drawers of water, the men condescending to pound up and prepare the sugar cane and honey from which *uki* or native wine is made, and to manufacture the *vinga* or bottle-shaped hives in which grain is stored after harvest. No attempt is made to cut the bush or improve the native paths running from village to village, and the Akamba fall a long way behind the Akikuyu in the neatness of their settlements and manufacture of their sleeping and grain huts.

In morality the Akamba can certainly not be said to be on a level with the Akikuyu, nor do I consider that they are so prolific. Chastity is neither expected nor valued among women before marriage, and after all dances, in which young men and girls unite, promiscuous connection is indulged in and connived at by the parents of the latter. In the same way all married women have lovers, which is easily understandable when one bears in mind that nearly every man has two wives and the average number is three or four to each *mutumia* or elder. Rich men, with eight or nine or even more wives, are in the habit of lending a member of their harem to a friend in cases where no children are born as a fruit of the marriage. The offspring, if any, resulting from this are the property of the husband and are looked on as his children. Although it sometimes happens that in the case of unmarried girls pregnancy results from their intercourse with their lovers, this condition of the girl is no bar to her marriage with another man, but rather a recommendation, since he is sure of at least one child from her. If she wishes to marry her lover, however, she may do so and he must pay for her by instalments as soon as he is able. The usual dowry among the Akamba is from three to five head of cattle which is paid to the father, and in the case of the woman running away from her husband has to be returned to him again.

The Akamba do not cultivate their *miunda* or fields with the thoroughness or neat methods of the Akikuyu. They merely scratch the soil with pointed sticks after it has once been broken up with long sharpened poles. The soil of Ukamba is rich, but as a rule the rainfall is about 10 inches less than that of the Kikuyu highlands. Drought is common and deep cultivation alone will help the soil to retain moisture, as has been demonstrated by all Europeans who have grown garden produce in Ukambani. Maize, millet, nnveli and tree beans form the staple grain crops and are the principal food of the Akamba, while bananas and sugar cane grow in swampy valleys and on each side of the numerous ravines running down from hill-tops. A kind of native vegetable marrow, called *malengi*, is sown and gathered once a year, being boiled and eaten in a rawish state. The *kiteta*, or calabash gourd, is allowed to grow ripe, when the inside is scraped out and the outside forms an excellent water-bottle, and if cut vertically two calabashes. Some elders have big herds of cattle, sheep, and goats which are used entirely for the purchase of wives, for the payment of blood money, and for redeeming from the Akikuyu any female relative who may have been left among them as hostage in time of famine.

Physical Type.

The Akamba, whose language, like that of the Akikuyu which it closely resembles, is of the Bantu family, are a fairly well-built race of negroids whose brown skin is a shade darker than that of Akikuyu. The woolly brown hair grows in little close tufts all over the head, but is only observable in this state among young boys, as the head is shaved by youths (after circumcision) with the exception of a small tuft where the *whorl* of hair occurs at the back of the head. All married men and elders shave the whole of the head, and so do young

unmarried girls from time to time, probably every six months, but they do not keep the head close shaved as is the case with married women. The various stages of a Mukamba's life are as follows:—A male child is called a *kivitzi* at birth and retains this title until he is about ten years old, when he becomes a *muwitzi*, or youth. After marriage the Mukamba is known as a *mwanake*, and when he finds himself in a position to give a feast, and present the principal members among the elders invited with a goat, he is received among the elect and is known as a *mutumia* until the day of his death. He carries a long staff with a forked top, called an *ndata*, as his signal of elderhood. A girl is called a *kaletu* until she is old enough to think of a lover, when she becomes a *mveta* or marriageable young woman, which appellation she retains until she is married and has borne a child, when she is usually alluded to as a *kiveti*. The term *mundu muka* is used of speaking of a woman generally as opposed to a man. In face, the Akamba follow the platyprosopic type found all through the Bantu tribes. Their foreheads are not as a rule as broad as those of the Akikuyu, the cheek-bones are more inconspicuous, but the negroid nose is alike in both tribes. The whole face is more inclined to the short oval and less squarely moulded than that of the Mukikuyu, the lips are equally thick as those of the latter, but they do not strike one as being so conspicuously everted, even if there is a greater tendency for the lower lip to hang down, giving the owner a markedly sensual appearance. The eyes are dark brown and small, often presenting themselves to the beholder as mere slits, set horizontally under the eyebrows, and showing only a thin piece of the sclerotic at each end of the axis. The front teeth of the Ulu and Kitui Akamba are filed into a sharp point which causes them to decay rapidly before middle age, owing to the removal of the enamel. I cannot find any reason for supposing that this custom is a relic of cannibalism, although I have heard it stated as such by African travellers. On account of this mutilation of the teeth the Akamba are unable to pronounce the letter R, for which they always substitute L. Among the Akamba living in the north-west part of the Kitui district the two upper incisors only are either partially filed where they join, or else are entirely knocked out. In every case in which I have asked for the reason of the mutilations I have been informed that it was done by way of ornament. Circumcision is universally practised among the Akamba, both on boys and girls, at the time of reaching puberty. The Akamba are as a rule of medium height, rather well knit above the waist, but generally, though not always, falling off below, and having slim, long legs with very little calf. As a rule they are not so bow-legged as the Akikuyu, their country being a flatter one. The arms are long proportionately with the legs, the fingers thin and slim. Here again, however, many exceptions present themselves, possibly owing to an admixture with another and shorter race. I have seen natives with short fleshy arms, thick spatulated fingers and distinctly muscular calves. I have seldom seen what could be called a good-looking Mukamba man, the face acquiring that heavy dull look after manhood which is so common among a polygamous and intemperate people; and although many of the women have

pleasing faces during their girlhood, the advent of children and hard work in the fields soon robs women both of their natural form, especially in the abdominal region, and of any brightness or intelligence of face they may have previously possessed.

Clothing.

Skins formed the universal garments of both sexes until the arrival of Arab and Swahali traders, but the Akamba have been quicker to adopt the wearing of blankets and sheetings than either the Akikuyu or the Masai. Young men now invariably wear a small loin cloth of coloured cotton, and every elder wraps either a blanket or a long piece of white sheeting around the shoulders, the whole reaching to the ankles and the ends being crossed over the right shoulder. Young unmarried girls wear only two garments, an apron of cotton cloth about 6 inches deep and 14 inches long, and a small flap of the same length and slightly deeper worn over the *nates*. Both these are called *kitemu*. These are secured around the waist by a belt generally worked in beads. A small skin (*oa*) worn over the shoulders by the older women, resembles the *zetu* of the Akikuyu, a married woman invariably wearing a larger *kitemu* both behind and before than an unmarried girl. Children, until they are of an age to walk, are carried in a *ngoi* or leather sling on the back, the legs clasped around the mother's loins; little boys generally go naked until they are five or six years old, but little girls always wear a tiny apron as soon as they can walk. The Akamba youths are very fond of wearing bright red fez caps which they buy in the bazaars, and, in common with most natives of East Africa, prefer the colour vermilion to either blue or white. Somalis and Swahilis on the east coast, and Hausas on the west, are the only tribes I have met which recognize how becoming white garments look against their rich brown or black skins.

Personal Ornaments.

The Mukamba youth, when he goes to a dance or is courting, wears a coil or two of *mukunzu*, or fine brass wire, bound around his forehead and the nape of the neck. A little white disc (about the size of a dollar) of snail shell is often bound to the unshaved tuft at the back of his head, and a fierce look given the face by rubbing *mulitutu* (or blue stone) or *sirrga* (red dye) around his eyes. Around the neck is worn the *munyu*, a finely linked copper chain, and several coils of white beads fall over the chest. The red and blue loin cloth is generally bound around the waist with several coils of *mukunzu* and both arms and legs, the former above the biceps and wrists, the latter around the calves, are decorated with several coils of heavy brass wire. A single garter of calf skin often decorates the knee on ordinary occasions. An elaborately wire bound knobkerry (*nzoma*) is only found in the equipment of very few dandies. The elders as a rule affect very few ornaments. *Elulya*, or iron ear ornaments, are generally worn, and on the fingers may be noticed two or three metal rings (*ngomi*). From the neck invariably depend *kiangi* (snuff flask) and *ngula* (tweezers) with which every single hair is carefully

removed from the cheeks and chin. A single *muthanga*, or brass anklet, generally completes the ornaments of an elder.

Young girls wear at dances as many strings of blue and white beads around their necks as they can conveniently carry. Around the wrists and ankles are closely twisted long strings of the smallest white beads, which give the wearer the appearance of wearing white muffatees and spats. These are also occasionally worn by young men. The apron is often elaborately covered with cowries or white beads, and the belt thickly studded with similar ornaments of a like colour. Women wear a few blue beads around their neck and waist, but after the birth of the first child a mother usually begins to discard most of her elaborate ornaments which are simply adopted in courting days to attract lovers. In the Mumoni district of Kitui alone have I seen unmarried girls wear a thin leather cape (*nguthi*) so thickly sewn over with cowries (*nguutu*) that none of the underlying skin was visible. This garment reached down half way between the shoulder and elbow, was fastened in front, and was only donned by the wearers at dances.

Tribal Sub-Divisions (Mumoni).

Mbanzi	Nguki	Kanyaa	Mula	Mbua
Matongoi	Muli	Kiluti	Nzau	Kathengi
Mwanziu	Nzuni	Katwui	Thiaka	

In a subsequent paper I hope to give a short sketch of some of the more remarkable of the customs in practice among the Akikuyu and Akamba of Kenya and Kitui. I have subjoined herewith a short list of about three hundred Kikuyu and Kamba words showing how closely the two languages are allied, and append side by side the Swahili and Teita equivalent where affinity makes comparison interesting.

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Ant ...	<i>ndutu</i> (jigger)	<i>nguku</i>	<i>chungu</i>	...
" (biting) ..	<i>thiraku</i>	<i>thilaku</i>	<i>siafu</i> ...	<i>siafu</i> .
" (termite) ...	<i>muthwa</i>	<i>mithuthu</i>	<i>mehwa</i>	<i>mzagu</i> .
Animal ...	<i>nyamo</i>	<i>nyamu</i>	<i>nyama</i>	<i>nyama</i> .
Antelope (granti)	<i>nguru</i>	<i>ngulu</i>	<i>swara</i>	<i>sariga</i> .
Ape ...	<i>nugu</i> ...	<i>nguli</i> ...	<i>nyani</i>	<i>sabao, mbogo</i> .
Arrow (head) ...	<i>mwngwi</i>	<i>muzyi</i>	<i>mshale</i>	<i>kiria</i> (iron).
" "	...	...	...	<i>ivano</i> (wooden).
" (shaft) ...	<i>kiano</i> ...	<i>chano</i>	...	<i>mbugi</i> .
" (shank) ...	<i>ururu</i>	<i>uthunzi</i>	...	<i>uchungu</i> .
" (featherend)	<i>mbako</i>	<i>mbako</i>	...	<i>wai</i> .
Axe ...	<i>ithanda</i>	<i>ithoka</i>	<i>shoka</i> ...	<i>izoka</i> .
Arm ...	<i>woko</i> ...	<i>kwoko</i>	<i>mkono</i>	<i>mkono</i> .
Arise, to ...	<i>ukirra</i>	<i>kila</i>...	...	<i>uka</i> .
Awake, to ...	<i>kirria</i>	<i>am'ka</i>	<i>am'ka</i>	<i>vuka</i> .

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Ask, to ...	uria ...	kulya ...	uliza ...	...
Appear, to ...	onwa ...	oneka ...	onekana ...	...
Alive ...	hwari ...	-thaiyu ...	hayi ...	...
Alone ...	-ike ...	-eka ...	(peke) yake ...	-ere.
Above ...	igurru ...	yulu ...	juu ...	juu.
Bag ...	kiondo ...	chondo ...	...	kidasi, kikuchu.
Beard ...	kideru ...	kingethwa ...	ndevu ...	zombi.
Bee ...	njuki ...	nzuki ...	njuki ...	choki.
Blood ...	nthakhame ...	nthakhame ...	damu ...	paga.
Back ...	mgongo ...	mawongo ...	mgongo ...	mgongo.
Body ...	mwiri ...	mwii ...	mwili ...	mumbi.
Bone ...	hindi ...	nindi ...	...	indi.
Bow ...	uta ...	uta ...	uta ...	ndana.
Brains ...	tombo ...	bwongo ...	bongo ...	uongo.
Banana ...	marigo ...	maiye ...	...	irugu.
Bowels ...	ndaa ...	maa ...	...	kifu.
Bamboo ...	murangi ...	mangi ...	mwanzi ...	murangi.
Bull ...	nzau (calf) ...	nzau ...	nzau ¹ ...	njau.
Bullock ...	ndewa ...	ndewa ...	...	mbiria.
Buffalo ...	mbogo ...	mbo ...	mbogo ¹ ...	mbogo.
Buttocks ...	matina ...	matako ...	matako ...	ishimba.
Bring, to ...	rehi ...	eti ...	leta ...	leta.
Build, to ...	aka ...	aka ...	aka ...	aga.
Bow, to ...	inama ...	kunama ...	inama ...	inama.
Before ...	mberi ...	mbee ...	mbele ...	mbele.
" go, to ...	...	...	...	kiria.
Child ...	kana ...	mwana ...	mwana ...	mwana.
Caravan ...	kiaro ...	chalo ...	msafara ...	charo.
Crow ...	igogo ...	ngunguru ...	kunguru ...	ngorusa.
Cold ...	heho ...	mbevo ...	pepo ...	mbeho.
Clothes ...	nguo ...	ngua ...	nguo ...	nguo.
Cow ...	ngombe ...	ngombe ...	ngombe ...	ngombe.
Crocodile ...	kingangi ...	kingangi ...	ngwena ...	mamba.
Come out, to ...	uma ...	uma ...	...	fuma.
Call, to ...	ita ...	eta ...	ita ...	ita.
Carry ...	kua ...	kua ...	chukua ...	tuala.
Cheat ...	henya ...	kenga ...	danganya ...	kalia.
Cover, to ...	kunika ...	kunika ...	funika ...	finikila
Climb, to ...	handa ...	ndanya ...	panda ...	joka.
Cry, to ...	rira ...	ia ...	lia ...	lila.
Check, to ...	giria ...	dzyia ...	zuia ...	legea.
Cure, to ...	honya ...	vonocha ...	ponya ...	okola.
Day ...	muthenya ...	muthenya ...	mchana ...	laru.
Door ...	maromo ...	mwomo ...	...	mlango.
Dog (wild) ...	ngui ...	nzui ...	...	koshi.
Drum ...	kihembi (for honey)	kithembi ...	ngoma ...	ngoma.
Devil ...	ngoma ...	aimo ...	...	mkinya, mbeho.
Die, to ...	ku-kwa ...	ku-kwa ...	ku-fa ...	fwa.
Do, to ...	eka ...	ika ...	weka (to place)	...

¹ Giriama dialect.

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Draw water, to ...	taha ...	tava ...	teka ...	teka.
Drink, to ...	nywa...	nywa...	nywa...	nwa.
Dig, to ...	enja ...	inza ...	chimba ...	kota.
Dry, to become ...	uma ...	uma ...	...	oma.
Drag, to ...	guchia ...	kusya ...	...	...
Egg ...	itumbi ...	itumbi ...	...	igi.
Ear ...	gutu ...	kutu ...	...	kudu.
Evening, in the ...	hwaiini ...	weyoni ...	jioni ...	nduasua.
Eye ...	izo ...	itho ...	jicho ...	iriso.
Elephant ...	njo ...	nzovu...	ndovu ...	chovu.
European...	nthungu ...	nthungu ...	mzungu ...	...
End, to ...	thirra ...	thella...	...	...
Eat, to ...	ku-ria ...	ku-ya ...	ku-la...	la.
Father ...	nu ...	nu ...	...	aba.
Fish ...	ikuyu ...	ikuyu ...	...	mkunga.
Face ...	usyu ...	uthyu ...	uso ...	ushu.
Food ...	kandu, irrio ...	kandu, idzyo ...	kande, ¹ chakula ...	findo.
Foot ...	kugurru ...	guu ...	mguu ...	kugu.
Finger ...	kiara...	kyaa ...	chanda ¹ ...	chala.
Fire ...	mwaki ...	mwaki ...	...	modo.
Fowl ...	nguku ...	nguku ...	kuku ...	nguku.
Firewood ...	nguu ...	nguu ...	kuni ...	mbandi.
Foreigner...	mugení ...	mweni ...	mgeni ...	mgeni.
Female ...	mke ...	mke ...	mke ...	mka.
Ford ...	irioko ...	ezuko ...	kivuko ...	...
Fly, to ...	ruka ...	uluka ...	ruka ...	chumba.
Finish, to...	mina...	mina...	...	malila.
Fall, to ...	ku-gwa ...	valuka ...	anguka ...	gwa.
Fold, to ...	kunja ...	kunza ...	kunja ...	kunja.
Forbid, to...	giria ...	lea ...	...	...
Follow, to ...	kinyira ...	vikila ...	...	...
Far ...	kuraiya ...	kwatza ...	...	kulele.
Famine ...	ngaraku ...	munyalu ...	nzala ² ...	njala.
Grass ...	nyeki...	nyeki...	nyasi...	nyasi.
Girl ...	mwiretu ...	mwetu ...	...	mwai.
Garden ...	mugunda ...	munda ...	...	mfuba.
Goat, he ...	nthengi ...	nthengi ...	...	sitima.
Goat (both sexes)	mburi ...	mbui ...	mbuzi ...	...
Goat (she) ...	...	...	...	sibeni.
„ (not having yet bred)	...	...	...	horo.
Goat (old female)	...	...	...	mugoma.
Giraffe ...	ndwira ...	ndwira ...	twiga ..	...
God ...	ngai ...	ngai ...	...	...
Guinea fowl ...	nganga ...	nganga ...	kanga ...	...
Gun ...	mzinga ...	ivuti ...	mzinga (can- non)	...
Go before, to ...	tongoria ...	tongodzyu ...	tangulia ...	...
Go away, to ...	thii ...	thii ...	...	gala.

¹ Southern Coast dialect.² Giriama dialect.

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Grind, to ...	<i>thea</i> ...	<i>thia</i> ...	<i>saga</i> ...	...
Great ...	<i>-nene</i> ...	<i>-nene</i> ...	<i>-nene</i> ...	...
Gratis ...	<i>mana</i> ...	<i>mana</i> ...	...	<i>burre</i> .
Go bad, to ...	<i>buza</i> ...	<i>oa</i> ...	<i>oza</i> ...	...
Hair ...	<i>nzwiri</i> ...	<i>nzwii</i> ...	<i>nyele</i> ...	<i>ndidia</i> .
Hand ...	...	...	...	<i>mkono</i> .
Hole ...	<i>mwanya</i> ...	<i>itonni</i> ...	<i>kipenyo</i> ...	<i>kidanga</i> .
House ...	<i>nyumba</i> ...	<i>nyumba</i> ...	<i>nyumba</i> ...	<i>nyumba</i> .
Head ...	<i>mutwi</i> ...	<i>mutwi</i> ...	<i>kichwa</i> ...	<i>chongo</i> .
Herdsmen ...	<i>murithi</i> ...	<i>mwithi</i> ...	...	<i>mlisha</i> .
Hartebeeste ...	<i>ngondi</i> ...	<i>ngondi</i> ...	<i>kongoni</i> ...	<i>ngwale</i> .
Hippopotamus ...	<i>nguu</i> ...	<i>nguo</i> ...	<i>kiboko</i> ...	<i>ngoluma, nguo</i> .
Honey ...	<i>uki</i> ...	<i>uki</i> ...	...	<i>vuki</i> .
Horn ...	<i>ruhya</i> ...	<i>uvya</i> ...	...	<i>luembi</i> .
Hunger ...	<i>ngaraku</i> ...	<i>nzaa</i> ...	<i>njaa</i> ...	<i>njala</i> .
Hill ...	<i>kirima</i> ...	<i>kiima</i> ...	<i>kilima</i> ...	<i>kilima</i> .
Hut ...	<i>kathuno</i> ...	<i>kathuno</i> ...	...	<i>kigaro, chanda</i> .
Hyena ...	<i>hiti</i> ...	<i>mbiti</i> ...	<i>fisi</i> ...	<i>mbisi</i> .
Hear, to ...	<i>igwa</i> ...	<i>iwa</i> ...	<i>sikia</i> ...	<i>sikila</i> .
Hide, to ...	<i>hitha</i> ...	<i>vitha</i> ...	<i>ficha</i> ...	<i>fisa</i> .
Harm, to ...	<i>ehia</i> ...	<i>thea</i> ...	...	...
Hold, to ...	<i>ata</i> ...	<i>ata</i> ...	<i>kamata</i> ...	<i>gwada</i> .
Hunt, to ...	<i>gwima</i> ...	<i>zyema</i> ...	<i>winda</i> ...	<i>dega</i> .
Heavy ...	<i>-rito</i> ...	<i>-wito</i> ...	<i>-zito</i> ...	...
Here ...	<i>haha</i> ...	<i>baa</i> ...	<i>hapa</i> ...	<i>aha</i> .
I ...	<i>ninyi</i> ...	<i>nye</i> ...	<i>ni-</i> ...	<i>mimi</i> .
Insect ...	<i>kankyamu</i> ...	<i>kasamu</i> ...	...	<i>mdudu</i> .
Iron ...	<i>mulinga</i> (iron wire)	<i>kiaa</i> ...	<i>chuma</i> ...	<i>chuma</i> .
Interpreter ...	<i>muthamaki</i> ...	<i>mumaneyi</i> ...	<i>mkulimani</i> ...	...
Ill ...	<i>morruaru</i> ...	<i>muwau</i> ...	...	...
Inside ...	<i>nthini</i> ...	<i>nthini</i> ...	<i>ndani</i> ...	...
Jigger ...	<i>ndutu</i> ...	<i>lulu</i> ...	<i>funza</i> ...	...
Jackal ...	<i>mbwe</i> ...	<i>mbewa</i> ...	<i>mbweha</i> ...	...
Jealous ...	...	...	...	<i>mwivu</i> .
Knee ...	<i>iru</i> ...	<i>egu</i> ...	...	<i>kitembero</i> .
Knife ...	<i>kahyu</i> ...	<i>kavyu</i> ...	<i>kisu</i> ...	...
„ (big) ...	...	...	...	<i>lufu</i> .
„ (small) ...	...	...	...	<i>ndaga</i> .
Knobkerry ...	<i>njoguma</i> ...	<i>nzoma</i> ...	...	<i>rungu</i> .
Kill, to ...	<i>hura</i> ...	<i>ku-aa</i> ...	<i>ku-ua</i> ...	<i>mbwaga</i> .
Know, to ...	<i>menya</i> ...	<i>manya</i> ...	<i>manya</i> ¹ ...	<i>mamya</i> .
Lip ...	<i>kiromo</i> ...	<i>mwomo</i> ...	<i>mdomo</i> ...	<i>momo</i> .
Lake ...	<i>iria</i> ...	<i>ia</i> ...	<i>ziwa</i> ...	<i>ziwa</i> .
Leg ...	<i>kugurru</i> ...	<i>guu</i> ...	<i>mguu</i> ...	<i>kugu</i> .
Leopard ...	<i>ngari</i> ...	<i>ngu</i> ...	<i>chui</i> ...	<i>ingi</i> .
Lizard ...	<i>tambazi</i> ...	<i>mwilo</i> ...	<i>mjusi</i> ...	<i>machoronyo</i> .
Lion ...	<i>malozi, munyambo</i>	<i>munyambo</i> ...	<i>simba</i> ...	<i>munyambo</i> .

¹ Giriama dialect.

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Lid ...	<i>nguniko</i> ...	<i>nguniko</i> ...	<i>kifuniko</i> ...	<i>lagiko.</i>
Looking glass ...	<i>kichichio</i> ...	<i>kizidzyo</i> ...	<i>kioo</i> ...	<i>kilole.</i>
Left behind, to be	<i>kereru</i> ...	<i>chewa</i> ...	<i>chelewa</i> ...	<i>ngokoro</i>
Love, to ...	<i>enda</i> ...	<i>enda</i> ...	<i>penda</i> ...	<i>enda.</i>
Laugh, to...	<i>theka</i> ...	<i>theka</i> ...	<i>cheka</i> ...	<i>seka.</i>
Loosen, to ...	<i>legelea</i> ...	<i>lelya</i> ...	<i>legeza</i> ...	...
Left (hand) ...	<i>-a motho</i> ...	<i>-a kwaka</i> ...	<i>-a shoto</i> ...	...
Little ...	<i>-nini</i> ...	<i>-nini</i> ...	...	<i>tini.</i>
Man ...	<i>mundu</i> ...	<i>mundu</i> ...	<i>mtu</i> ...	<i>mundu.</i>
Mother ...	<i>maiitu</i> , ¹ <i>nana</i> ²	<i>mwaiito</i> ...	...	<i>mau.</i>
Moon ...	<i>mweri</i> ...	<i>mwee</i> ...	<i>mwezi</i> ...	<i>mori.</i>
Monkey ...	<i>ngima</i> ...	<i>ngima</i> ...	<i>kima</i> ...	<i>mwandovu,</i> <i>ngima.</i>
" (colobus)	<i>nguiu</i> ...	<i>ngao</i> ...	<i>mbega</i> ...	<i>mbega.</i>
Magie ...	<i>urogi</i> ...	<i>woi</i> ...	<i>uchawi</i> ...	<i>uchawi.</i>
Maize ...	<i>mbembe</i> ...	<i>mbemba</i> ...	<i>muhindi</i> ...	<i>pemba.</i>
Male ...	<i>mume</i> ...	<i>mume</i> ...	<i>mume</i> ...	<i>mdogume.</i>
Meat ...	<i>nyama</i> ...	<i>nyama</i> ...	<i>nyama</i> ...	<i>nyama.</i>
Milk ...	<i>irria</i> ...	<i>iya</i> (sour)	<i>maziva</i> ...	<i>madiva.</i>
" ...	...	<i>ethumo</i> (fresh)	...	...
Mangouste ...	<i>segeri</i> ...	...	<i>mchiro</i> ...	<i>lusa.</i>
Misfortune	<i>mutino</i> ...	<i>uthino</i> ...	...	...
Mortar (corn)	<i>nderi</i> ...	<i>ndee</i> ...	<i>kinu</i> ...	<i>kidu.</i>
Mouth ...	<i>kanwa</i> ...	<i>kanywa</i> ...	<i>kanwa</i> ...	...
Move house, to	<i>zama</i> ...	<i>thama</i> ...	<i>hama</i> ...	<i>fuchwa.</i>
Measure, to	<i>gera</i> ...	<i>ela</i> ...	...	<i>pima.</i>
Mix, to ...	<i>trukanya</i> ...	<i>vulanya</i> ...	<i>changanya</i> ...	<i>runganya.</i>
Medicine ...	<i>mthaiga</i> ...	<i>muti, dawa</i> ...	<i>dawa</i> ...	...
Mountain...	<i>kirima kinene</i>	<i>mwima</i> ...	<i>mlima</i> ...	<i>kifumbu.</i>
More ...	<i>-engi</i> ...	<i>-engi</i> ...	<i>-ingi</i> (many)...	...
Name ...	<i>ritwa</i> ...	<i>dzitwa</i> ...	<i>jina</i> ...	<i>izina.</i>
Neck ...	<i>ngingo</i> ...	<i>ngingo</i> ...	<i>shingo</i> ...	<i>singo.</i>
Night ...	<i>utiku</i> ...	<i>utuku</i> ...	<i>usiku</i> ...	<i>kio.</i>
News ...	<i>ohoro</i> ...	<i>uvoo</i> ...	<i>habari</i> ...	<i>uvoo.</i>
Near ...	<i>hakui</i> ...	<i>pakavi</i> ...	<i>hakui</i> ³ ...	<i>kavuki.</i>
New ...	<i>-eru</i> ...	<i>-eu</i> ...	<i>-pya</i> ...	<i>mpya.</i>
Noise ...	<i>inageni</i> ...	<i>ngeme</i> ...	<i>kelele</i> ...	...
Not, there is	<i>kutirri</i> ...	<i>patii, ratii</i> ...	<i>hapana</i> ...	...
Not (interj.)	<i>accha</i> ...	<i>aiyee</i> ...	<i>hasha</i> (Arabic)	...
Nobody ...	<i>ti mundu</i> ...	<i>ti mundu</i> ...	<i>si mtu</i> ...	...
Old man ...	<i>mundu mzuri</i>	<i>mutumia</i> ...	<i>mzee</i> ...	...
Ostrich ...	<i>nyaga</i> ...	<i>nyaa</i> ...	<i>buni</i> ...	...
Owl ...	<i>ndundu</i> ...	<i>ndundulu</i> ...	<i>bundi</i> ...	...
Oath ...	<i>muma</i> ...	<i>umo</i> ...	...	<i>kisaho.</i>
Odour ...	<i>ku-nunga</i> ...	<i>murike,</i> <i>zungo</i>	<i>un-</i> <i>manuka</i> ...	...
Open, to ...	<i>hingura</i> ...	<i>vingua</i> ...	<i>fungua</i> ...	<i>rugua.</i>
Overturn, to	<i>karura</i> ...	<i>alula</i> ...	<i>pindua</i> ...	<i>gausa.</i>
Once, at ...	<i>rimwe</i> ...	<i>oyuyu</i> ...	<i>marra moja</i> ...	...

¹ Used by boy to mother.² Used by girl to mother.³ Giriama dialect.

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Old ...	-kuru	-kuu ...	-kukuu	a kala.
Outside ...	nja ...	ndza ...	nje ...	shigadi.
Place ...	handu	vandu, pandu	mahali	handu.
Possessor...	mwene	mwene	mwenyewe	mwenyi.
Poison ...	ururu	ivai ...	sumu...	uchungu.
Pig ...	nguruwe	ngu'ue	nguruwe	nguve.
Potato ...	nguachi	ekwazi	kazi ...	...
Place, to ...	iga ...	ia ...	tia ...	-vika.
Pierce, to...	tonya...	tonya...	penya	-dunga.
Put on (clothes), to	igwika	evwika	vika ...	-faa.
Pour out, to	ita ...	itia ...	...	-dia.
Pull, to ...	guchia	kusya...	vuta ...	-okota.
Pregnant...	-chu ...	-ito ...	-zito	-ona kifu.
Pitcher ...	nyungu	nungu	mtungi	...
Partridge...	ngware	ngwale	kware	...
Pigeon ...	nduturra	ivoi ...	njiwa	...
Python ...	ndwira	etaa ...	chatu...	...
Quickly ...	mituki, narua	mituki, haya	haya ...	...
Quarrel, to	teta ...	teta ...	teta ...	-teta.
Quiet be, to	kirra...	kilya...	tulia ...	-nyamaza.
Quiver, a ...	...	...	...	fin.
Ram ...	ndurume	ndume	kondoo mume	bauru.
" (castrated)...	...	...	...	ngonde.
Rain ...	mbura	mbua...	mvua...	mvua.
Rhinoceros	hurria	mbutzya	faru, pea	mbela.
River ...	ruui ...	uzi ...	...	moda.
Rat ...	mbea ...	mbea ...	panya	mbeba.
Rope (fibre)	ndigi...	ulii ...	...	...
Road ...	njira...	njia ...	njia ...	njia.
Remain, to	ikara...	ekala...	salia ...	kaia.
Refuse, to	rega ...	lea ...	...	lega.
Remember, to	ririkana	lirikana	...	kumbuka.
Return, to	chuka	dzyoka	...	rudi.
Raw ...	-ezi ...	-thi ...	-bichi	-bishi.
Ripe ...	hehu ...	-iu ...	bivu ...	-agura.
Rotten ...	uru ...	-ou ...	-ovu...	-vare.
Red ...	duni ...	duni	-ekundu	-ekundu.
Strength ...	hinya	vinya...	...	ndigi.
Shepherd...	mrizi...	mwithi	...	mlisha.
Snake ...	njoka...	ntzyoka	nyoka	choka.
Sun ...	riua ...	dzua ..	jua ...	ihwa.
Shield ...	ngo ...	ngao ...	ngao ...	ngao.
Sheep (ewes)	ngondu	ilundu	kondoo mke	osi.
" (after bearing)	...	...	...	ngondi.
Stone ...	ihiga...	ivia ...	jiwe ...	igo.
Strap ...	mukwa	mukwa	...	mukoga.
Salt ...	munyu	munyu	chumvi	kisereri.
Smoke ...	ndogo	chuki...	moshi	mosi.
Spear ...	itumo	itumo	fumo...	mkuke.
Seed ...	mbeyu	mbeyu	mbegu	mbeyu.
Sandal ...	kirulu	kiatu...	kiatu...	kiatu.

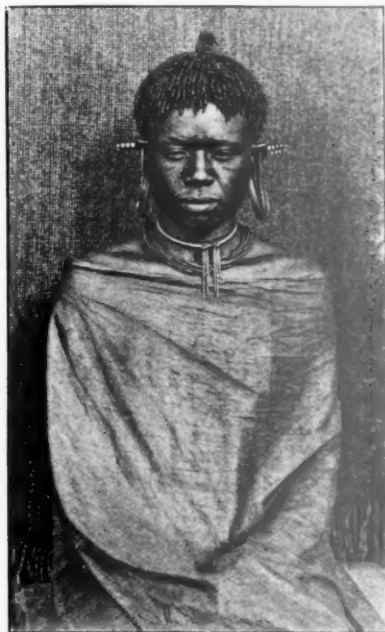
ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Sick man...	muruaru	muwau	...	mkongo.
Stand, to ...	rugama	ungama	simama	kaa kimusi.
Seek for, to ...	maza	mantha	...	lola.
Separate, to ...	heria	tanva	tenga	vaga.
Shut, to ...	hinga	vinga	funga	funga.
Spill, to ...	ita	ita	...	mwaga.
Stink, to ...	nunga	nyunga	nuka	orea.
Sew, to ...	tuma	tuma	...	dunga.
Shave, to ...	enja	enza	nyoa	ara.
Sing, to ...	ina	ina	imba	...
Split, to ...	tuwika	atua	pasua	rashuka.
Strike, to...	hura	kuga	piga	kada.
Stay, to ...	tinda	tinda	shinda	kaa.
Surround, to	thiururuka	thyululuka	zunguka	mara.
Sleep, to ...	koma	koma	...	lala.
Sharp ...	-ugi	-oi	...	-kali.
Short ...	kuhi	-kupi	-fupi	-fui.
Slowly ...	kahora	mbola	polc	mbombwa.
Thread ...	ndigi	ndii	uzi	mfumo.
Town ...	mudzyi	mudzyi	mji	muzi.
Thing ...	kindu	kindu	kitu	findu.
Tongue ...	urimi	wimi	ulimi	lumi.
Trap ...	mtego	uteo	mtego	mtego.
Tweezer (hair)	ngori	ngula	...	...
Thief ...	mwichi	kingee	mwivi	kitoyi.
Thigh ...	kieru	utambi	...	bara.
Thorn ...	mwiwa	mwiwa	mwiba	munjwa.
Tobacco ...	mbaki	mbaki	tumbako	tumbako.
Testicles ...	heki	mee	tamboa	mbumbu.
To-day ...	reo	mutheny'uu	leo	leo.
To-morrow	rushyu	keoko	kesho	labu.
Toe ...	kera	chaa	...	ino.
Tooth ...	igeyo	eyo	jicho	igego.
Tree ...	muti	muti	mti	muti.
Twins ...	mahasa	maratha	mapacha	masa.
Try, to ...	geria	elya	...	tima.
Throw, to...	ikia	icha	...	duga.
Take, to ...	twara	twaiia	twaa	twaa.
Tear, to ...	tembura	tembua	raruia	rashua.
Think, to...	ririkani	lirikana	thani	gesha.
Tired, to become...	noga	noa	choka	zila.
Turn, to ...	garura	alula	...	gauka.
Tremble, to	inaina	telema	telemeka	suka.
Together ...	hamwe	vamwe, pamwe	pamoja	kimosi.
Urine ...	mathukumo	maumau	mkojo	ugochi.
Under ...	nthi	nthini	chini	usolobe.
Vegetable marrow	rungu	malengi	matango	marungu.
" gourd ...	inya	kiteta	kibuyu	kisheri.
Voice ...	kanwa	kanywa	kanwa (mouth)	soiti.
Work ...	wira	wia	...	kazi.
Womb ...	nyungu	ivuni	tumbo	kifu.

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Water ...	<i>mahi...</i>	<i>mandzi</i>	<i>maji ...</i>	<i>maji.</i>
War ...	<i>ita ...</i>	<i>kau ...</i>	<i>mvita ...</i>	<i>vuda.</i>
White man ...	<i>nthungu ...</i>	<i>nthungu ...</i>	<i>nthungu ...</i>	<i>mzungu.</i>
Wife ...	<i>mundu muka</i>	<i>mundu muka</i>	<i>mwanamke ...</i>	<i>muka.</i>
Wind ...	<i>rohuho ...</i>	<i>loho (spirit) ...</i>	<i>roho (breath) ...</i>	<i>mbeho</i>
Witch ...	<i>mrogi ...</i>	<i>kiveti kioi ...</i>	<i>mke mchawi ...</i>	<i>msabi.</i>
Woman ...	<i>muka ...</i>	<i>muka ...</i>	<i>mke ...</i>	<i>muka.</i>
Wait for, to ...	<i>terera ...</i>	<i>etela ...</i>	<i>...</i>	<i>besera.</i>
Wink, to ...	<i>heneria ...</i>	<i>venedzya ...</i>	<i>konyesha ...</i>	<i>kinyira.</i>
Walk ...	<i>chera ...</i>	<i>tembuka ...</i>	<i>tembea ...</i>	<i>sela.</i>
Wash, to (trans.) ...	<i>thambya ...</i>	<i>thambya ...</i>	<i>...</i>	<i>oga.</i>
" clothes to ...	<i>...</i>	<i>...</i>	<i>...</i>	<i>ogosha.</i>
White ...	<i>-eru ...</i>	<i>-eu ...</i>	<i>-eupe ...</i>	<i>eupe.</i>
Where ? ...	<i>cha ...</i>	<i>ba, va ...</i>	<i>wapi ...</i>	<i>wapi ?</i>
Year ...	<i>imera ...</i>	<i>mwaka ...</i>	<i>mwaka ...</i>	<i>kimu.</i>
Youth ...	<i>kana ...</i>	<i>mwanake ...</i>	<i>kijana ...</i>	<i>mjigi.</i>
Yesterday ...	<i>ira ...</i>	<i>eo ...</i>	<i>jana ...</i>	<i>igwo.</i>
" day before ...	<i>io ...</i>	<i>eso ...</i>	<i>jerusi ...</i>	<i>lavuki.</i>
Yonder ...	<i>kuria ...</i>	<i>kuya ...</i>	<i>kule ...</i>	<i>kula.</i>
Zebra ...	<i>njagi ...</i>	<i>nzai ...</i>	<i>...</i>	<i>foro.</i>
One ...	<i>-mwe ...</i>	<i>-mwe ...</i>	<i>mosi ...</i>	<i>mojeri.</i>
Two ...	<i>-iri ...</i>	<i>ili ...</i>	<i>pili ...</i>	<i>mbili.</i>
Three ...	<i>izatu ...</i>	<i>itatu ...</i>	<i>tatu ...</i>	<i>ndatu.</i>
Four ...	<i>'nnya ...</i>	<i>'nna ...</i>	<i>'nne ...</i>	<i>nne.</i>
Five ...	<i>ithano ...</i>	<i>itano ...</i>	<i>tano ...</i>	<i>kasano.</i>
Six ...	<i>thandatu ...</i>	<i>thanthatu ...</i>	<i>sita ...</i>	<i>tandatu.</i>
Seven ...	<i>migwanza ...</i>	<i>monza ...</i>	<i>saba ...</i>	<i>fungati.</i>
Eight ...	<i>nyanya ...</i>	<i>nyanya ...</i>	<i>nane ...</i>	<i>nane.</i>
Nine ...	<i>kenda ...</i>	<i>kenda ...</i>	<i>kenda ...</i>	<i>kenda.</i>
Ten ...	<i>ikumi ...</i>	<i>ikumi ...</i>	<i>kumi ...</i>	<i>ikumi.</i>
Eleven ...	<i>ikumi na imwe</i>	<i>ikumi na umwe</i>	<i>kumi na moja</i>	<i>" na mojeri.</i>
Twelve ...	<i>" " iri ...</i>	<i>" " ili ...</i>	<i>" " mbili</i>	<i>" na mbili.</i>
Thirteen ...	<i>" " izatu</i>	<i>" " itatu</i>	<i>" " tatu ...</i>	<i>...</i>
Fourteen ...	<i>" " nnya</i>	<i>" " nna</i>	<i>" " 'nne ...</i>	<i>...</i>
Fifteen ...	<i>" " itano</i>	<i>" " itano</i>	<i>" " tano</i>	<i>...</i>
Sixteen ...	<i>ikumi na thandatu</i>	<i>" " thanthatu.</i>	<i>" " sita ...</i>	<i>...</i>
Seventeen ...	<i>ikumi na migwanza</i>	<i>ikumi na monza</i>	<i>" " saba ...</i>	<i>...</i>
Eighteen ...	<i>ikumi na nyanya</i>	<i>ikumi na nyanya</i>	<i>" " nane</i>	<i>...</i>
Nineteen ...	<i>ikumi na kenda</i>	<i>ikumi na kenda</i>	<i>" " kenda</i>	<i>...</i>
Twenty ...	<i>mirongo iri ...</i>	<i>miongo ili ...</i>	<i>makumi mavili</i>	<i>mirongo miili.</i>
Twenty-one ...	<i>" " na imwe</i>	<i>" " na umwe</i>	<i>asharini moja¹</i>	<i>...</i>

¹ Arabic.

ENGLISH.	KIKUYU.	KAMBA.	SWAHILI.	TEITA.
Thirty	<i>mirongo izatu</i>	<i>miongo mitatu</i>	<i>makumi matatu</i>	<i>mirongo mitatu.</i>
Forty	„ <i>'nna</i>	„ <i>nna</i> ...	<i>makumi manne</i>	„ <i>minne.</i>
Fifty	„ <i>itano</i>	„ <i>itano</i> ...	<i>makumi matano</i>	„ <i>mitano.</i>
Sixty	<i>mirongo than- datu</i>	„ <i>than- thatu</i>	<i>makumi sita...</i>	<i>mirongo mitano atu.</i>
Seventy	<i>mirongo mig- wanza</i>	<i>miongo monza</i>	„ <i>saba</i>	<i>mirongo mfungati.</i>
Eighty	<i>mirongo nyan- ya</i>	„ <i>nyanya</i>	„ <i>manane</i>	<i>mirongo minane.</i>
Ninety	<i>mirongo kenda</i>	„ <i>kenda</i> ...	„ <i>kenda</i> ...	<i>mirongo kenda.</i>
Hundred	<i>igana</i> ...	<i>cana</i> ...	<i>mia</i> ¹ ...	<i>igaona.</i>
Two hundred ...	<i>magana meri</i>	<i>cana ili</i> ...	<i>miteen</i> ¹ ...	...

¹ In Kikuyu the cardinal numbers are scarcely ever used beyond 100. *Ngiri* = “very many,” represents an amount which cannot be counted.



Photographs by W. Scoresby Routledge, Esq.

KIKUYU TYPES.

THE KIKUYU AND KAMBA TRIBES, BRITISH EAST AFRICA.



A DANDY.



A "MUNDU MZURI."



KIKUYU MATRON.



KIKUKU UNMARRIED GIRLS.

Photographs by W. Scoresby Routledge, Esq.

THE KIKUYU AND KAMBA TRIBES, BRITISH EAST AFRICA.



KIKUYU SKELETON HUT.



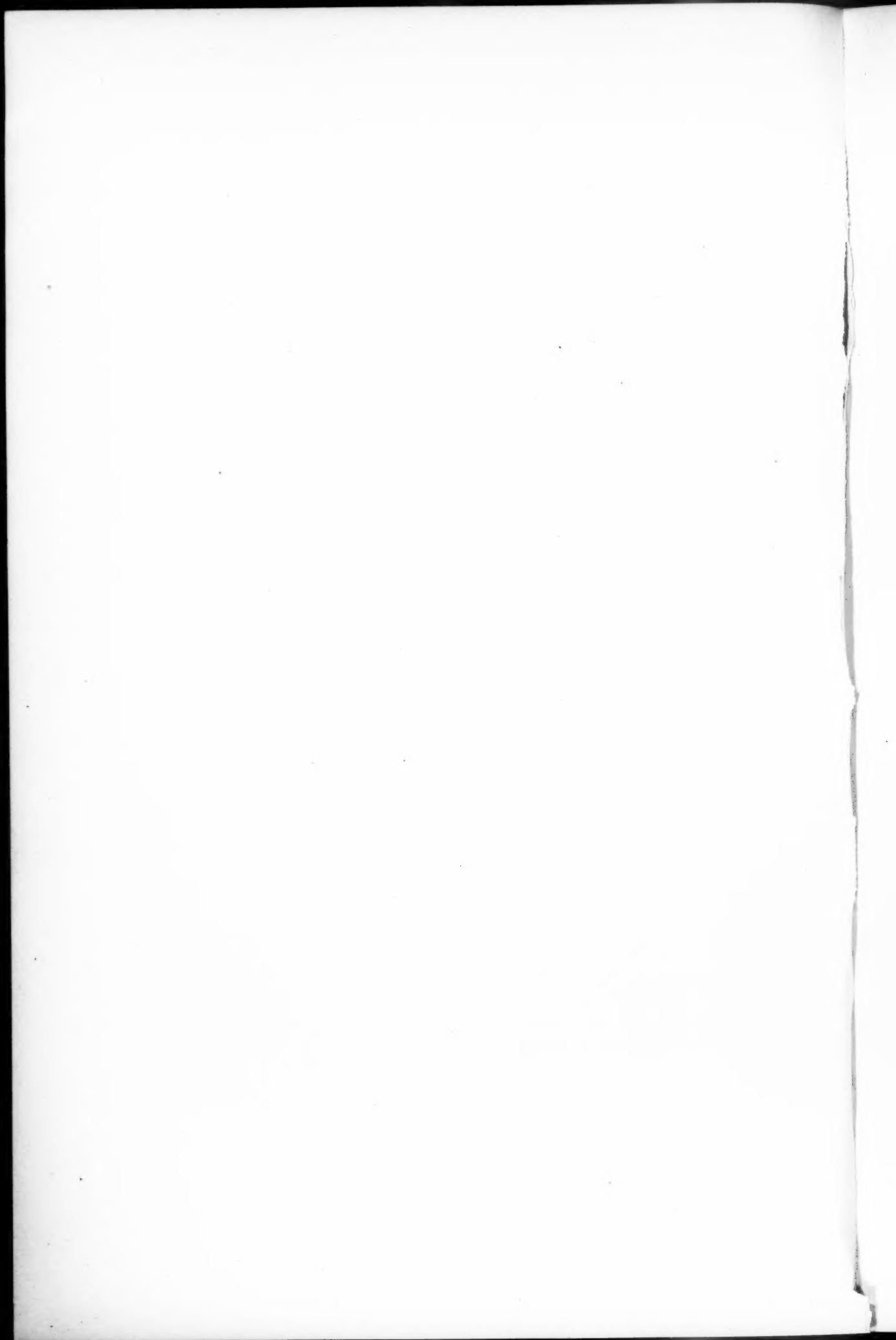
KIKUYU YOUTHS.

Photographs by W. Scoresby Routledge, Esq.



KIKUYU BAG MAKING.

THE KIKUYU AND KAMBA TRIBES, BRITISH EAST AFRICA.





KAMBA WOMEN.

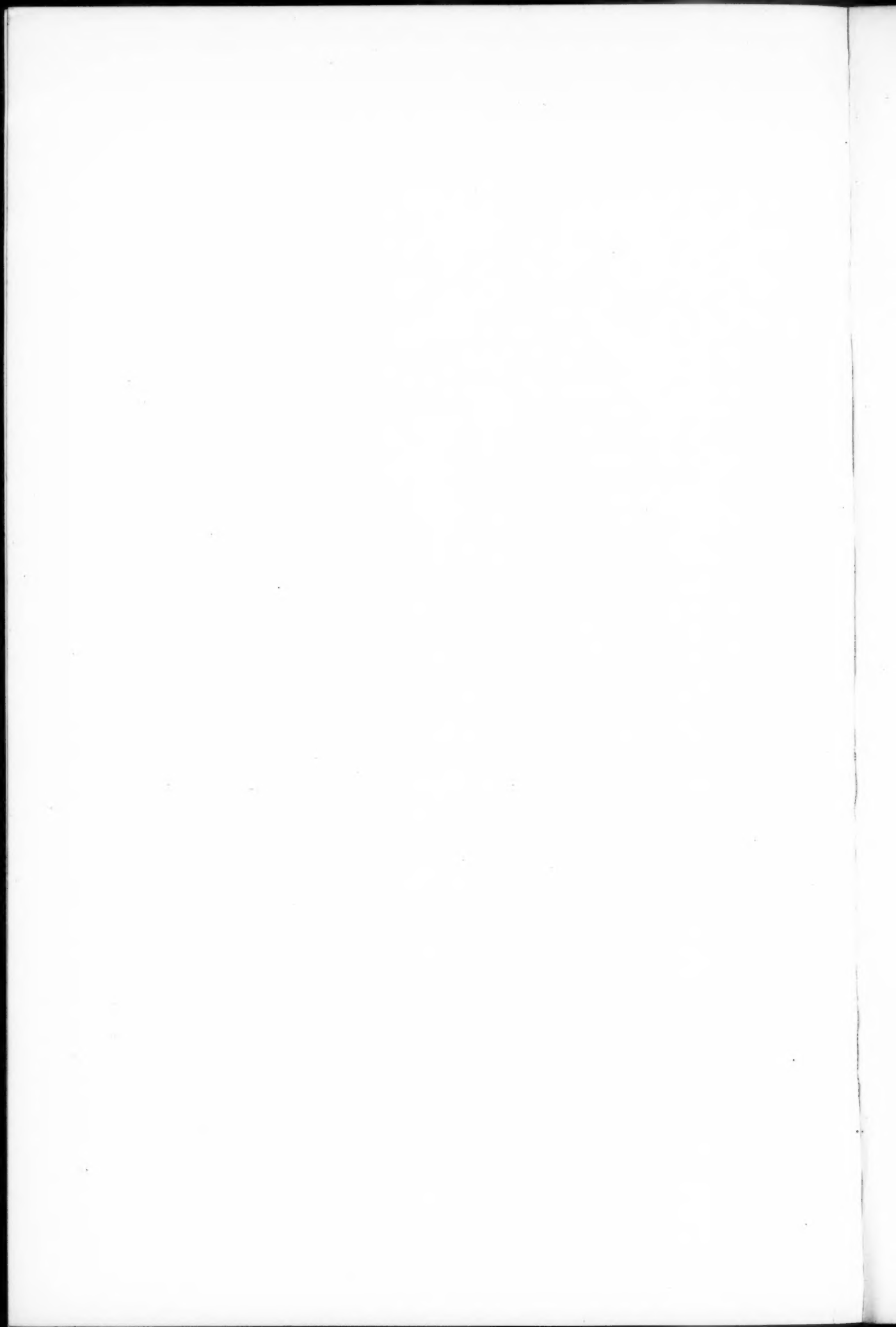


A KAMBA CARAVAN.



KIKUYU WOMEN.

THE KIKUYU AND KAMBA TRIBES: BRITISH EAST AFRICA.



SUB-TRIBES OF THE BAHR-EL-GHAZAL DINKAS.

BY CAPTAIN S. L. CUMMINS, R.A.M.C.

[WITH PLATE VI.]

FROM East to West, on a line from Gebet Shambe on the Bahr-el-Jebel to Waw Station, the Dinka Clans are as follows:—

Kesh or Shesh.—From Bahr-el-Jebel to Lao River.

Atwot.—Between Lao River and Naburi Stream.

Agar.—From Naburi to Rumbek, but principally along the Nam River.

Gok or Kok.—On the road from Rumbek to Tonj; and principally round Jur Ghattas. All these clans speak the same language, and resemble each other closely, but the *Atwot* are peculiar in relying on the bow and arrows rather than on spears. Each clan is at war with all the others, and cattle-raids are constantly taking place and affording fresh pretext for hostility.

The *Agar*, being the richest, most numerous, and most war-like clan, is a source of dread to all its neighbours.

Appearance of the people.—The Dinkas are tall and spare, the average height being about 5 feet 8 inches, while some individuals attain to a great height. The head is long and flattened from side to side, thus contrasting with the round-headed type characteristic of the Golo, Bongo, and A. Zandeh peoples. In this respect the Dinkas resemble the Nuheres. The face is more aquiline than the typical negro; and though the jaws are prominent, the lips are not very thick.

Clothing.—The men are usually naked, though a small strip of sheep-skin is sometimes worn behind, suspended from a string tied round the waist.

The women wear leather aprons, one in front and the other behind, fastened above round the waist, the lower ends cut into a series of tails often bordered with white or coloured beads sewn along the edge, and hanging to below the knees.

Personal Ornaments.—The men wear large ivory armlets above the biceps, and smaller rings of ivory, brass, or rubber at the wrists.

Strings or collars of beads are worn at the neck; and charms are also suspended from the neck by strings and allowed to hang over the chest. The beads worn vary with the fluctuations of fashion, but the charms are constant, and consist of such things as the teeth of lions or leopards, snake-skins, the seeds of certain grasses, and so forth. A tying of skin, worn below the knee, recalls a similar, but more elaborate, ornament worn by the Zulu; and an ornamental arrangement of dry grass is often to be seen round the ankles.

Helmets of various types, made of woven grass and "pipe-clayed" with ashes, some plain and others elaborately plumed with ostrich feathers, are worn by the

more important people. Each morning the men smear their faces and bodies with the ashes of burnt wood, obtained from the fires of the previous night, and cattle-dung. This gives them a grey or pink appearance which, however, decreases as the day wears on, and work induces sweating.

The women wear as many beads as possible at the neck, waist, wrists, and ankles. Brass and other rings are also worn at the wrists and ankles; and a series of little brass rings in the ears is very popular.

I have never seen a woman smeared with ashes.

Heads.—Men shave their heads up to a line varying in position, the pole usually being left covered with hair, the latter often being matted together with clay or ashes, and stained a red or grey colour.

The women shave their heads.

CUSTOMS.

Relating to Marriage.—Polygamy is the rule. The number of wives is only limited by the ability of the husband to support them.

A wife is obtained (1) by purchase, the price being paid in cattle; or (2) by capture from hostile clans or tribes. The wives obtained in the latter way are inferior in position to the purchased wives; but their children are the equals of those of the superior wives. I have been told that the purchased wives are always chosen from the tribe, but I imagine that this is not invariably the case, as the Dinkas on the Jur River seem to intermarry with the Jurs.

The ceremony of taking a wife is as follows:—

The would-be-husband sends an ambassador to arrange with the bride's father as to the price to be paid. This is usually in cattle, though possibly supplemented by iron spades, and is paid in advance. A woman fetches from five to sixty cattle in proportion to her charms.

The price having been settled, the bridegroom goes to the bride's village, accompanied by chosen friends. A house is allotted to him close to that of the lady's father.

On the day of the wedding, a feast is held, but the bridegroom remains in his house.

His friends then proceed to the house of the bride, where the women are gathered to receive them.

On arriving, they demand the bride. The women reply that without gifts she cannot be given up. Bargaining then commences; the young men saying "for what will you give her?" and the women replying "for so much." Or sometimes the young men pretend to try to force their way in and carry the lady off; and while this mock strife is going on, one of the party cuts a hole in the grass wall of the hut, from behind, and carries the bride off to her husband's quarters.

The couple remain in the village of the father-in-law until a child has been born and has learnt to walk.

They are then permitted to return to the husband's country.

Divorce.—A man can put away his wife from him by arranging with her father, the latter returning part of the original price. I fancy this must be subject to some proof of misconduct on the lady's part; but this was denied by my informant.

A divorced woman naturally fetches only a small price on being married again.

Adultery.—The penalty for adultery with the wife of another is death. The woman is sent back to her father, who has to return the price paid for her.

Fornication with an unmarried woman is punished by confiscation of the man's property. The girl becomes his wife without further ceremony.

Disposal of wives, etc.—When a man dies, his wives become the wives of his son without further ceremony, with, of course, the exception of the mother of the son in question.

If the son has children by these inherited wives, they are regarded by him as brothers, not as sons. They are called the sons of the deceased original husband of the mothers. If a woman becomes pregnant as the result of a connection with an unrecognized stranger—as may happen in cases of assault, etc.—the child is the property of the woman's brother, but is looked down upon.

If a Beng (Arabic "Sheik"), is too old to be sexually efficient, he nevertheless continues to take wives, but these cohabit with his sons. Children so begotten are regarded as the children of the Sheik, and as the brothers of their actual fathers.

Birth.—The umbilical cord is cut with a special knife, and ligatured.

When the decidua have separated and come away, the woman is washed, and the breasts squeezed, so that the first drops of milk fall on the ground.

The child is then put to the breast.

When a child has grown sufficiently to be able to fetch water from a vessel and bring the cup to its father, it is regarded as old enough to be weaned.

Wet nursing does not appear to be practised; if the mother cannot nurse the child, goat's or cow's milk is substituted.

Houses and Villages.—The Dinka hut (Pl. VI, Fig. 3) is circular in shape, with walls of wood and grass, coated, outside and in, with clay; a conical grass roof, and a door just high enough to admit a man creeping on hands and knees. No windows are thought necessary. The hut is usually raised on piles to a height of from 7 to 8 feet above the ground. As a rule two huts are built on one platform, and the whole surrounded with a light wall of bamboo or twigs. On the ground level, a circle of cement surrounds the bases of the piles, and affords a sitting place where the women can crush the grain, weave grass, and gossip.

The ground under the platform, between the piles, is used as a store for grain, which is buried there in earthenware vessels, or in closely-woven baskets.

The surface of this sheltered space is usually reserved as a pen for the sheep and goats.

A Dinka village is very straggling, and stretches over a very wide area; each house standing by itself, surrounded by its own clearing and crops, and separated from its neighbours by a space of from 50 to a 100 or more yards.

As the trees are only felled just far enough from each house to permit of the planting of crops, many large trees stand all through the village, making it impossible to see more than a few houses from any one point.

The cattle are usually all kept together in a series of large pens, made in a manner similar to the Arab Zereeba, and known as "Merahs."

The cattle are guarded and tended by young men told off for that duty, whose part it is also to keep alight the fires, which are kindled at sunset each day to keep off the flies during the ensuing night.

Nothing is more characteristic of Dinka-land than the appearance of these "Merahs" at evening; the pungent smoke of the wood fires, rising in a blue-grey haze across the red and gold of a Sudanese sunset; the groups of lowing cattle, gathered close to the fires, where they know they are safest from their tormentors; and the spearmen seated round the embers, or working among the beasts.

The position of villages is chiefly determined by the proximity of water, a large quantity of this being necessary for the cattle.

It is easy to see the advantages gained by raising the houses on piles, as this renders them safe from the attacks of enemies and wild beasts, keeps the dwellings dry during the rains, and affords the inhabitants a view over their crops during the time of high grass.

The straggling formation of the village is much more difficult to account for, especially in view of the fact that the tribes are constantly at war one with another, and that no arrangement could be conceived less suitable for defence.

As a matter of fact, hardly any attempt at defence is ever made, the women and children rushing for concealment to the bush the moment an attack is announced, and the men employing themselves in driving the cattle to a place of safety, or in defending them if need be. In fact, the sole motive for an attack is the capturing of cattle, while the great object of the defenders is to protect, not their homesteads, but their herds.

An attack is signalled by a peculiar cry passed from house to house; or, at night, by the kindling of fires on successive platforms through the village.

Ceremony of Speech, etc.—A ceremonious conversation, as, for instance, between an interpreter and a chief, is always carried out in a characteristic manner.

The parties seating themselves on the ground next to each other, the speaker seizes the hand of the listener, and holding it in his own left hand, works its fingers backwards and forwards with his right, during the whole speech, to emphasize each remark.

After each sentence he pauses, the listener affording proof of his attention by a guttural sound or grunt; this latter courtesy is invariable, even in the most

common-place conversation. I have been amused to listen to a man on the river-bank thus punctuating the remarks of a friend in a canoe, the latter all the while receding further and further from the shore. Before the conversation was finished the responsive grunt had become a roar, but politeness decreed that it should never be omitted.

When two people meet, each holds the right hand up on a level with his face, the palm being directed towards his friend. Each, at the same time, emits a grunt of salutation. If a chief is anxious to be very polite, his correct course is to spit in one's face. I rejoice to say that this custom is dying out, as between native and Briton, but it is not yet extinct.

OCCUPATION AND PURSUITS.

Agriculture.—No attempt is made at irrigation; this not being necessary owing to the abundance of rain. The staple product is *Durrha* (Sorghum), which is grown largely for food. *Sim-sim* "*Dokn*," and a kind of ground-bean known as *Foule Soudane* (Arab), are also grown, as well as a kind of pumpkin known as *Gurrah* (Arab).

Tobacco is grown, and much appreciated.

Hunting and Trapping.—The elephant is killed by driving a weighted spear into the neck, as the beast passes under a tree.

Antelopes are trapped. Traps are usually to be seen round the *Durrha* crops, and consist of a heavy beam, so suspended that an animal, passing below it, springs the trap with his feet, and is killed by the falling beam.

I have an impression that the Dinkas are not very keen hunters. They are spearmen and cattle-herds, and are so preoccupied with the latter employment that they think of little else. I think that hunting and the use of the bow and arrows go together. The spear is not a huntsman's weapon, except in countries where horses can be used in the chase.

Fishing.—Fishing is of great importance to the Dinkas. Their country is traversed by many rivers teeming with fish, and upon this pursuit they depend largely for food at certain times of the year.

Some communities maintain separate inland and river-side villages, living in the former during the rainy season and tending their crops, but when the dry weather comes, and the rivers have so shrunk as to be suitable for fishing, travelling to their river-side dwellings, where fish are abundant, and the cattle can be watered without difficulty.

This supply of food comes at a most opportune time, just when the harvest of the last rainy season is almost finished, and no fresh supply of grain can be obtained for some months to come.

The fish are netted or speared. In hunting the hippo and crocodile special barbed spears are used, the head being only lightly fastened on the shaft so as to detach easily, but connected to the middle of the shaft by a slender rope. Thus,

when driven home, the head remains fixed in the animal, and the detached shaft floats as a buoy, indicating his position as he swims below the surface. With this indicator more spears are easily driven in, and the animal succumbs to loss of blood and fatigue, and is pulled ashore.

Fish are split and sun-dried, and thus preserved can be stored for a long time.

Large numbers of fish are caught, when the river is low, by damming up a bend of the stream, and bailing out the water.

Cattle.—The possession of cattle is the great ambition, and the tending of them the chief occupation of the Dinka. The cattle are small in size and yield a poor supply of milk, in spite of the excellence of the pastures; a fact which Schweinfurth attributes to excessive in-breeding, resulting in a deterioration of the stock.

The bullocks often attain to a good size, and carry splendid horns.

Nothing confers such prestige and position as the possession of large herds, and the authority of a Beng ("Sheik") who loses his cattle is usually impaired. The Dinkas consider milk to be the best of all foods, and drink very largely of it.

They also use the urine of cattle for washing themselves, and smear their bodies with the ash of burnt dung. It is worthy of note, in this connection, that they always wash out their milk-gourds with cow's urine, in order, they say, to prevent the milk from coagulating in the stomach after drinking. They believe that colic will follow if this precaution is omitted. Certain British officers, finding that the milk disagreed with them, were constrained to put this to the test; with some success.

At great feasts, or in times of pressing want of food, a bullock is perhaps killed for eating, but this is a very rare occurrence. Cattle are slaughtered by stabbing; not, as a rule, by clubbing or cutting.

Not only do their cattle give to the owners social position and a supply of food, but they also make possible the purchase of the next great object of desire—wives.

Cattle are currency in any transaction, as for instance, where reparation for an injury is demanded, and paid in cattle.

A well-grown heifer is of great value in these bargains. A cow that has calved several times is thought not so good as one that has never calved; as the latter may be expected to have a more prolific future before her.

In the absence of money, cattle may be regarded as the "root of all evil" in the Dinka country.

Every raid has for its object the acquisition of stock, and for its justification, the story of some former raid by the enemy upon the intending raiders.

Every quarrel and dispute is nearly or remotely traceable to the same origin, and if the proverb "*Cherchez la femme*" applies, the woman is only reckoned in terms of cattle. It is probably this constant necessity to defend or acquire cattle that has developed the military qualities of the Dinkas out of proportion to those of their more peaceful neighbours.

If, however, the vices of the Dinkas are derived from their greed of cattle,

they owe their virtues also to the same source. With them this passion seems to replace, in some measure, the ideals and aspirations to which the European has recourse as foils to the materialism of life.

There is in this curious cattle-craft a note of distinction that relieves the otherwise rather sordid picture of the Dinka's life. The warrior who is too practical to resist superior force in defence of his homestead or relations will often display reckless gallantry in attempts to rescue or defend his herds.

As cattle-masters, the Dinkas exhibit a gentleness and kindness foreign to them in other respects. It is very rarely that they will strike even the most refractory beast; and in their treatment of sick cattle, they are much more advanced than in their management of human disorders.

The Dinka is stigmatized as lazy because he resolutely refuses to work as a carrier, and because he seldom sows more grain than, by aid of a good rainy season, will just suffice for his wants.

But in the tending of cattle he never tires. Such labour is to him a labour of love. To feast his eyes on fat kine, feel their sleek coats, drink of their milk, and adorn himself with the ashes of their dung, no Dinka would ask a happier life.

His songs, his stories, his rude modelling in clay, and, in fact, all his progressions in the direction of art, are inspired by his one absorbing interest—cattle.

Legal and Ethical Ideas.—It is difficult to be certain whether the Dinka has reached that stage of development when such abstractions as right and wrong, as contrasted with expediency and the reverse, emerge.

It is certain, however, that the force of public opinion regulates conduct within the community.

Such misdemeanours as disobedience, theft, adultery, murder, and so forth are checked and punished. The women are good wives and mothers; the men good husbands and fathers. Among themselves, the people are kindly, genial, and in some respects, generous. As against this, however, I fear it cannot be denied that the elderly people are usually thin and starved-looking to an extent not explicable by the flight of time; whereas the younger men and women, especially the more attractive of the latter, are always sleek and well-fed.

Any virtues that are apparent in the relations between individuals of a community are quite lost sight of in the dealings of one community with another. In such dealings the only code that obtains is the "simple plan, that he may take who has the power, and he may keep who can."

A few ideas as to conduct, chiefly founded on cattle-craft seem, however, to be common to the tribes. For instance, it is, curiously, deemed immoral to open the vein of a cow, drink of the blood, and close the opening again, sparing the beast's life, though such a course might obviously be convenient when food was not to be obtained, and yet the owner shrank from sacrificing an animal.

Tribal laws exist for the regulation of fishing rights, and for marriage, divorce, and so on.

One very curious law, bearing on the right to fish in certain waters, came to light during an official inquiry into the cause of a quarrel.

If a man is killed by a crocodile, the rights of fishing in the waters where the accident took place pass from the owner to the son of the deceased.

Possibly this may be designed to make the owners responsible for the safety of the waters in their possession.

The *Beng* (Sheik) of a village is vested with the power of enforcing the laws, and in this is supported by the force of public opinion.

Punishment practically resolves itself into confiscation of property or death. A crime held deserving of the death penalty may, however, be compounded for by the payment of a number of cattle decided upon by the Sheik, or demanded by the relatives of the persons offended against. It is very difficult to get clear information on this point, as the matter seems to depend rather on such incidentals as the capacity of the offender to pay, the degree of anger of the relatives, and so on, than on any fixed code.

Medicine and Surgery.—As most diseases are attributed to magic, treatment rationally aims chiefly in the direction of counter-magic, to the detriment of a possible development of other methods. The witch-doctors, however, supplement their spells by the use of herbs, and seem to be acquainted with the properties of some plants.

Even where disease is not directly attributed to the machinations of enemies, the idea of "possession" still seems to hold. Illness thus being considered something that has entered in, the natural treatment appears to be to drive it out. Herbs that act in a manner harmonious with this notion are, accordingly, the ones most popular as cures. [For instance, gonorrhœa is treated by an emetic, on the supposition that the disease will thus be got rid of by the mouth.] Emetics and purges are the most popular kinds of medicine. It is noteworthy that a bitter bark (probably a *Quassia* or *Brucea*) is used in powder for the treatment of fever.

Counter-irritation is believed in for most local illness. A headache is treated by a tight cord round the head; and bronchitis, and other chest affections (to which the Dinkas are very prone), are similarly alleviated by a tight cord round the thorax. It is possible that this latter treatment may have gained a reputation by placing the chest-wall at rest, and thus relieving the pain of, say, pleuritis.

"Firing" with a hot iron, cutting with knives over the seat of pain, and "cupping" with a cow's horn after first scarifying the surface, are all tried for local diseases. These methods are all, probably, copied from the Arabs, who believe in counter-irritation as the sovereign remedy for every disorder.

I have been told that the Dinkas are very clever cattle-doctors. I permitted such a man to try his hand on some sick cattle last summer, but without much effect in any direction.

A favourite remedy for most acute diseases of cattle is to cut off the top of an

ear, and let it bleed. One can imagine this doing good in pneumonia, and such diseases.

Religious Ideas.—The Dinkas believe in a god, called by them *Deng-deet* (meaning, perhaps, rain giver). They regard him as the ruler of the universe, and the creator of mankind, or, according to one story, as the actual father of the human race, or, perhaps, more particularly of the Dinka race.

They conceive him as a vague and immense power, and, as the idea of power is with them hardly to be separated from that of hostility, they endeavour to appease and propitiate him with gifts and sacrifices.

I imagine it does not occur to them to pray. They endow their god with such Dinka propensities that prayer to him would seem waste of time.

I have been told that, in former days, a special hut was built in each village as god's house, where sacrifices were made. I have never seen such a house, and have been told that, latterly, the custom has been allowed to disappear. The members of an expedition are said to gather together at some tree or other selected spot before marching off, for the purpose of going through some ceremony and making sacrifices.

If rain falls during the ceremony, it is considered as a warning against starting, and the expedition is postponed.

As a rule, the Dinka is very reticent as to his beliefs, but I succeeded in obtaining the following story from two rather communicative tribesmen, who came to Waw together one day. My Dinka interpreter professed to be acquainted with the story also. I had not an opportunity of verifying it by asking the Dinkas about it; but it seems too elaborate and peculiar to be an invention. *Deng-deet* has a wife called *A-buk*, and by her two sons, *Kur-Konga* and *Gurung-Deet*, and one daughter, *Ai-Yak*. Satan is represented by *Lwal Burrajok*, the father-in-law or brother-in-law of *Deng-deet*, with whom he was formerly on good terms.

Earth and heaven were at one time connected by a path, by means of which men got to heaven or to earth, at will. Unfortunately, this happy state of things was not destined to continue.

One day *A-buk*, the wife of *Deng-deet*, was busy making men and women from a bowl of fat, given her by *Deng-deet* for the purpose.

Softening the fat over the fire, she moulded the figures from it with her fingers, as the Dinkas would moist clay. As each person was completed, he or she passed down the road to earth.

Deng-deet, passing that way, cautioned her against *Lwal Burrajok*, who was in a bad humour.

Abuk, however, forgot the warning, and went to the forest to fetch wood, leaving the bowl on the fire.

There *Lwal* found it, and, having drunk some of the fat, and spilt more on the ground, he proceeded to make figures from what was left, but, out of mischief, made them badly, with eyes, nose, and mouth all shut up and useless.

Then, fearing the wrath of Deng-deet, he retreated down the path to earth.

Abuk, on her return, was horrified to see what had occurred, and hastened to tell Deng-deet of Lwal's misbehaviour.

Deng-deet at once started in pursuit, but found the path to earth cut off and impassable.

Lwal, anticipating pursuit, had persuaded the bird Atoi-toish to bite through the path with its bill. (*Atoi-toish* is a little red and brown bird, about the size of a wren, that builds in the roofs of huts, and is very common throughout the Sudan.)

Lwal, being now safe on earth, determined to make all the cripples (God's failures) whole, and thus to minimise the greatness of God and exalt himself in the sight of mankind.

So he took fat, melted it, and calling all men to him announced that he would make all cripples well again. So saying he took a lame man, passed an iron through him, and plunged him in the boiling fat on the fire, with the idea of moulding him afresh. The onlookers were terrified, and ran away.

Deng-deet now lives at a place called Wool Kerigok. Thither go the souls of the dead, a four months' journey to the east, and cross the River Toj-bol-ongol.

In that country the sheep are as big as bulls, the cattle immense, and on the river's bank, among the bamboos, are bees so large that they can slay a man with their sting as if it were a spear. On the road are many lions, and the Sultan of the lions, Meriang, the son of Ayor, is there. For many years he took each soul that passed, ere it could reach the river, but God bound him with an iron collar, so that souls can now safely pass him by.

In the country of Wool Kerigok there is but one tree, and that is leafless with only two branches, one to the right and the other to the left like the horns of a bull.

Men can look across the river and even see the cattle on the other side, but if they take canoes and try to cross it they become foolish, lose the way, and are lucky if they can return.

(The latter part of the story, referring to Wool Kerigok, suggests a traveller's tale brought back by some inland Dinka who had penetrated to the banks of the Bahr-el-Jebel, feasted his eyes on the distant Nuher cattle on the other bank, and on his return embellished the story as Dinkas do. The picture of remote inaccessible and enormous cattle would be very likely to suggest Heaven to a Dinka.)

SUPERSTITIONS.

Witchcraft.—Witchcraft is very widely believed in and may be roughly described under two headings—

- (1) As exercised by deliberate professors of the art for rewards.
- (2) As imputed to hostile individuals or clans.

Under Class (1) the professional witches are grouped. They are influential and to some extent popular, though their popularity is of the transient quality inspired by fear.

They combine some knowledge of the properties of herbs and of crude surgical methods with such pure humbug as the claimed power to counteract hostile witchcraft, to procure rainfall, and so forth.

For instance, I knew one man who was skilled in the use of herbs and cautery, and to this extent was a worthy physician. He, however, so far forgot professional ethics as to announce himself a magician, and as able to defeat the magic of enemies. His procedure was as follows:—He would first persuade his patient that his illness was caused by the presence in his body of a root or stone charmed into him by a witch. He would then, having concealed such a root or stone in his cheek, apply his lips over the seat of pain and suck vigorously. Finally he would produce the root or stone and persuade the patient that this having been removed the cure was complete.

The mental relief afforded to credulous patients by the sight of what they believe to be the cause of their sufferings, thus removed, must often be beneficial. Certainly the magician in question enjoyed a great reputation. He was suspected, however, of being a dangerous man, because to quote the criticism I once heard passed on him, "as he knew the way out, he must also know the way in."

Hostile Magic.—Hostile magic is, I fancy, credited on the one hand to conquering tribes such as the Agars, to explain to the conquered their own inferiority, and on the other hand is attributed by conquerors to their defeated enemies; as the desire to do harm being inferred, and the power to do it by fair means being absent, a recourse to magic is thought natural.

As an example of the first class, it is commonly believed that the Agars can assume the forms of lions, leopards, and hyenas, and thus disguised, steal the flocks of their enemies at night.

On the other hand the peaceful Jurs are believed by the Dinkas to be very powerful magicians, and are credited with the ability to produce cattle diseases, illness, and other troubles.

In addition to these supernatural powers attributed to a whole clan, individuals are also believed to have the power to dry up cow's milk, make fat children lean, destroy the beauty of women, and so forth. These ends are gained by means of the evil eye, by charming roots or stones into the bodies of the victims, or by casting spells over the path where the enemy is likely to pass. Witchcraft of this kind is regarded as a crime, and is punished by death. I have been told that a worker in iron is looked upon as particularly likely to possess the evil eye. He is believed to injure cattle by looking at them, and so unpopular is he, that he finds it very expensive to buy a wife and very difficult to dispose of a daughter. This story should, I think, be taken with caution, as the position of a blacksmith among warriors should be one of honour. Possibly the Jurs

being great iron workers and also great witches, some stigma may rest on the whole craft of blacksmiths.

A belief in ghosts is common, and their appearance is thought to herald disaster. The departed are thought to live, sometimes as men, in distant villages, where they are unrecognized.

The spirits of the dead are believed to sometimes take the forms of lions, leopards, hyenas, and such beasts; an idea probably derived from seeing these animals near newly-made graves.

ARTS AND DESIGNS.

Ideas of design are of the simplest. They are expressed in the decoration of pottery and of calabashes, grass-woven baskets, and platters, weapons, wooden head-pillows, and also in the incised markings on the skin; and consist principally of such elementary figures as series of concentric circles, parallel lines, running straight, or in a wavy or angular manner, and series of dots.

The shapes chosen for head-pillows, seats, and so forth, are probably suggested

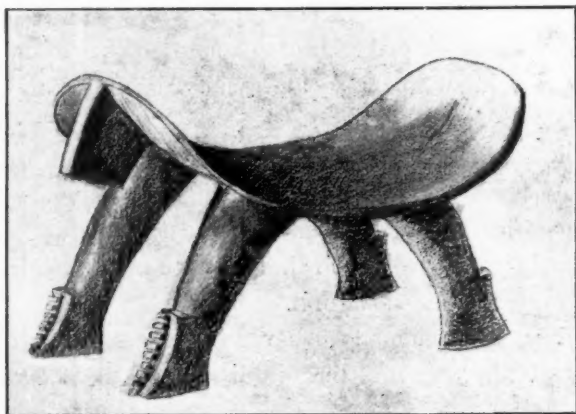


FIG. 1.—DINKA STOOL.

by the shapes of animals; something in each design resembling the limbs, head, and tail. These articles are not fitted piece by piece, but are carved straight from tree trunks. Their symmetry and finish argue great skill and industry in the makers, especially in consideration of the rude instruments at their disposal.

Seeing how deeply interested the Dinka is in cattle, one naturally expects

to see this bias emerge in his arts. In this, one is not disappointed.

The people take great delight in making little clay models of cattle.

These models are very interesting and suggestive owing to the fact that, by constant attempts, extending through countless generations, and over a vast period of time, a fixed conventional shape has been arrived at, and is reproduced with hardly any variety, from one end of Dinkaland to the other.

The peculiarities that are constant and remarkable are as follows:—The face is only represented by a little convexity below the horns. The fore legs are fused, the hind legs divided, suggesting the common attitude of cattle in which, when the fore legs are approximated, the hind legs are separated for support. The hump, being an object of great admiration to the Dinka, is emphasized in his models.

The significance of these conventional cattle models is greatly increased by comparing them with the similar clay models of animals made by neighbouring tribes.

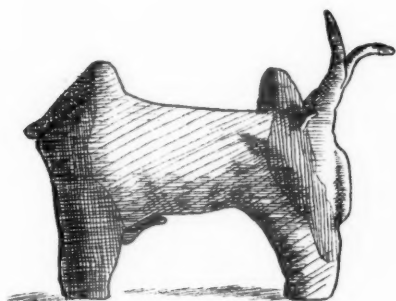


FIG. 2.—CLAY MODEL, OX.

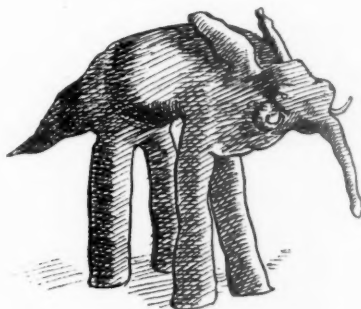


FIG. 3.—CLAY MODEL, ELEPHANT.

Those, for instance, made by the Golos, a tribe of agriculturists, whose only livestock consists of chickens, are simply efforts to reproduce what they see in as realistic a manner as possible, the success of the reproduction varying with the skill of the designer.

The Dinkas attempt other animals as well as cattle, notably the elephant, as one would expect, seeing the vast impression that huge beast makes on the beholder. The influence of cattle, however, makes itself felt even in attempts to model other creatures.

Connected with his ideas of design is the Dinka method of making a map. He is endowed with considerable sense of locality, and almost always accompanies and illustrates his description of roads and rivers by drawing them in the dust with his index finger or the shaft of his spear. In this mapping he displays considerable accuracy.

MUSIC.

Musical instruments consist of war drums, horns, whistles, calabashes, and rude stringed instruments with a compass of only a few notes.

Songs are monotonous, and consist of strings of words, rapidly enunciated either in unison, or in refrain with sudden chorus, the tune being simple in the extreme.

When singing in unison, the singers keep wonderfully well together, and the songs are illustrated with elaborate gesture, which, as a rule, gradually works itself up into dancing.

The songs, of course, deal chiefly with cattle, but also touch upon love, war, and religion. They reveal a keen observation of nature, and display a new and rather pleasant aspect of the Dinka. The words of a few are appended :—

Dinka Songs.

1. Chorus seems to be known to all the Agars, and is said to have come to them from their fathers.

The white Bull, shining like the Sun, is a joy to the women.
 His horns are like the masts of ships.
 The ruler of the world delights in him.
 His hump is so high that it towers above the high grass.
 And that bull is my aunt's, and she is giving him to me.

2. Bring a *furwa* (a dressed skin) and bring a covering ;
 Put them over the hind-quarters of the Bull, for they are naked.
3. I have a red bull with twisted horns ;
 He is so big that men can sit and rest in his shadow.
 He went into the lands of the people and ate their beans (*foule Soudane*).
 The land trembled because of him.
 My father is a proud man at my greatness :
 Like a lion am I, and my enemies are scattered before me.
 "Where," says he, "in the world is there another like my son."

4. My Bull is as white as the silvery fish in the river ; as white as the egret on the river bank ; as white as new milk.
 His bellowing is like the roar of the Turk's cannon from the great river.
 My bull is as dark as the rain-cloud, that comes with the storm.
 He is like Summer and Winter ; half of him dark as the thunder-cloud ; half of him as white as sunshine.
 His hump shines like the morning star.
 His forehead is as red as the arum's wattles (*arum* = ground hornbill).
 His forehead is like a banner ; seen by the people from afar.
 He is like the rainbow.
 I shall water him at the river, and drive
 My enemies from the water with my spear.
 Let them water their cattle at the well ;
 The river for me and my bull.
 Drink, O Bull, of the river. Am I not here with
 My spear to protect you ?

GOLO.

Physical Appearance.—The Golos are short, thick-set, muscular, with round heads, and broad, jolly faces ; the noses flat, the lips thick, and the eyes wide apart. In colour they are much lighter than the Dinkas, and vary considerably among themselves from chocolate-brown to a shade that might, not inaccurately, be called plum-colour. The hair is frizzly, and only a very slight beard is grown. The calves are large, and well-formed, contrasting with the thin legs of the Dinka.

Clothes.—The men wear a cloth, brought between the legs and up to a cord worn round the waist, over which it is "fanned" out in front and behind.

The women wear bunches of green leaves suspended, one in front and the other behind, from a waist-cord.

Cloth is made from locally-grown cotton, on a loom of a very simple kind, which, however, does not differ in principle from looms used by the Arabs.

The Golos are always eager to buy cloth, and seem very anxious to adopt European dress when possible. The two Sheiks of the tribe at Waw always preferred old flannel suits given them by officers to the robes of honour which had been presented to them.

Beads are worn round the neck and waist. Armlets of ivory are not worn. Wristlets of beads or leather are sometimes seen.

Tribal Marks.—The most constant mark is a Λ -shaped notch between the central incisors of upper jaw, made by filing each tooth on its inner and lower aspect.

This is common to the Golo, Shiré, Bongo, M'Doggo, and Belanda, and is evidently a stage on the way to or from the pointed tooth characteristic of the Niam-Niam. In the latter, the central upper incisors are filed similarly on the outer and lower aspects, as well as on the inner and lower, and are thus brought to a point.

Marriage.—The bridegroom sends an agent to propose to the girl's father, and make arrangements as to price. An exchange of one girl for another is often arranged.

Otherwise the price is paid in *Maloots* (a form of iron spade in use in agriculture). Three hundred maloots is a good price for a lady of high rank and great beauty, the daughter of a Sheik. An ordinary woman may be had for about fifty. Before final arrangements or payments are made, the bride is brought to meet the bridegroom, and is given the option of refusing to marry him, if she wishes. Without consent on her part no marriage can take place. The number of wives depends on the ability of the husband to support them. "Kiango," the father of the present chief of that name, had three hundred wives, but only had children by three of them. The remainder worked as servants, and had to prepare food for the two thousand followers of the chief.

Houses and Villages.—The Golo houses are usually round, with grass roofs. The principal men often have large square grass buildings. The villages are much more compact than those of the Dinkas, but the houses are built with much less care, and are not raised on piles. This difference probably depends upon the fact that the Golos live on the rocky uplands, while the Dinkas build their villages close to the low-lying pasture lands, and are therefore compelled to take more elaborate precautions against damp.

Occupations.—The Golos depend for their food chiefly on the grain they grow. They are very industrious workers, and grow Dhurra enough for all their wants, and can afford to sell large quantities to Government. They also grow pumpkins, sweet potatoes of two kinds, various leguminous vegetables and, since the French visited the country, leeks. The latter are greatly valued, and the fact that they are grown successfully is a good example of the receptive nature of the Golo. The Golos own a few sheep, but their principal live-stock consists of chickens.

They possess many of these and value them as food and for use as sacrificial offerings. They have no cattle at all, nor do cattle thrive in their country, as the seroot fly and other pests make the lives of cattle unbearable. The Golos are thus exempt from Dinka raids, a very desirable state of things for them, as they are a peace-loving, quiet people.

Arts.—Pottery, basket-making, decoration of calabashes, very much as described for the Dinkas. Iron is smelted and made into *Maloots*, knives, spears, and arrow-heads; the Golos being bow-men. Cotton-cloth is made from locally grown cotton, but I have seen no cloth made with any attempt at a pattern or design. Straw hats are plaited from dry grass, and are worn by the men.

Music is primitive, horns, drums, and instruments in which sticks, laid across open calabashes, are beaten with wooden hammers, being the chief instruments used. Music may be said to advance slightly beyond the stage of noise in the use of rude stringed instruments similar in principle to the "Rebaba" of the Niam-Niams.

Clay models are made to represent animals, and contrast with those made by the Dinkas in being much more realistic.

Superstitions.—Witchcraft is widely believed in, and all misfortunes are attributed to it. The evil eye is greatly feared. The charming of roots and stones into the body of an enemy is as widely attempted and as firmly believed in, as among the Dinkas; and the method of cure (the root being sucked out by a wise man) is identical.

Ghosts are believed in, but are supposed to be very rare. When seen they are always the harbingers of death or disaster to the beholder.

The shadows (Vu-Vu) of things and people are regarded as important. At death, the shadow departs to the place of God. The word "Vu-Vu" is used in the sense of soul, when speaking of the departed.

The Golo theory of dreams is that the shadows of things and people enter the dreamer's mind during sleep. From this it would appear that the connection between the shadow and the substance is believed to be severed during sleep.

When on the march, the Golo will take a stone, or a small ant-heap (about the size of a man's head), and place it in the fork of a tree, to retard the setting of the sun. The fact that this is believed to be efficacious shows that the Golo does not allow experience to shatter illusions.

Various charms are worn to avert evil. For instance, a man who travelled to the country of the Niam-Niam and back with a letter, showed me, on his return, a grass seed that he had worn, of a kind locally called *Magar*. He said that lions, meeting him on the road, turned their faces from the charm, and crept away into the bushes.

Religion.—The Golo's god is named *Umvile* (pronounced "Umveeley"). He is the father of mankind by his wife, *Barachi*.

Umvile lives above the earth, in a place called Van-do-Bah. The word in



FIG. 1. DINKA GIRL.

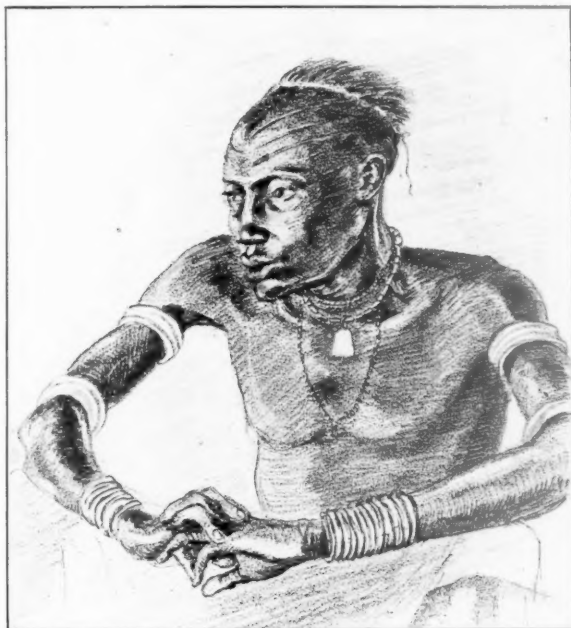


FIG. 2. DINKA.



FIG. 3. DINKA HOUSE.
SUB-TRIBES OF THE BAHR-EL-GHAZAL DINKAS.

this connection means heaven, but, ordinarily, means a house and its surroundings. Bah is the word for house.

The souls (*Vu-Vu*) of the virtuous, after death, go to heaven, but a satan named "Mah" employs himself, at God's command, in burning the souls of the wicked.

It is interesting that the Golos believe Satan to be the servant of God.

Prayers are not offered to God, but, in times of sickness and trouble, he is propitiated with sacrifices.

The sacrifice is carried out as follows: a feast is made; about twenty chickens are killed, and the first of these is kept for Umvile. The remainder are cooked, and eaten with *Marrisa*¹ (native beer) and *Kissra*¹ (a kind of bread).

The one chicken kept for Umvile is placed in a special hut, without being cooked or plucked, and next it is placed a *Bourma*¹ (jar) of *Marrisa*. Possibly, the *Marrisa* is poured on the ground. If the offerings are still to be seen next day, they are removed, but *not eaten*. A little house is said to be built next their own houses by the Golos for sacrificial purposes. I have not seen such houses. There are no priests.

Golo Medicine.—In addition to the methods of "counter-magic," already mentioned, the Golos use certain herbs in cases of illness. A list is appended.

1. *Bela* (Golo name). A tree common near Waw. It is either *Quassia* *sp.* or *Brucea* *sp.* The wood, stripped of the bark, is dried, powdered, and used externally as an application to ulcers; or internally, suspended in water, as a remedy for fever.

2. *Dca-fah* (Golo name), N.O. *Rubiaceæ*. Is used as a remedy for gonorrhœa. The roots, dried in the sun, are powdered. Taken in hot water, on an empty stomach, it causes vomiting, thus being supposed to expel the disease by the mouth.

3. *Bolo* (Golo name). *Indigofera* *sp.* This is a remedy for guinea-worm (*Filaria medenensis*). The root is powdered, and, from the powder, a poultice is made, and applied to the opening, from which the worm is protruded. It is said to kill the worm.

4. *M-Bodu* (Golo name). *Indigofera bougensis*. A round tube-like root is dug up, sliced, and powdered. The powder, wrapped in a cloth, and wetted, is applied as a poultice to swollen joints.

[The botanical names above given were obtained on my submitting some dry specimens to Kew Herbarium for classification. The specimens were so imperfect that some were not certainly recognisable.]

THE JUR TRIBE.

I will attempt no systematic description of the Jurs, as I have been unable to learn enough about them for this. They are a small community, living in a series of villages along the Jur River close to Waw.

¹ Arabic words; not Golo.

Schweinforth mentions them, and spells their tribal name *Dyoor*, which he says means "Foreigner."

They profess to be a branch of the Shilluk tribes, and are considered to be so by the Dinkas. They are closely allied by marriage and in customs with the Dinkas, and speak the Dinka language for convenience, but also have a language of their own, which it would be interesting to compare with that of the Shilluks. In appearance they greatly resemble the Dinkas, and they wear ivory armlets and helmets just as the Dinkas do. They are less war-like than the latter, and do not possess many cattle, though they have plenty of sheep and goats. They also have a few chickens.

Their tribal craft is iron-smelting, at which they are clever and industrious. I have been told that most of the spears and knives used by the Shilluks and Nuher on the White Nile are made by the Jurs, and traded for beads, salt, and other commodities. I have seen a party of Jurs starting for Meshra-el-Rek, with spears, cow-bells, etc., in such a trading expedition.

The Jurs are believed, by all their neighbours, to be very malevolent and greatly skilled in witch-craft. In spite of this, or possibly because of it, they do not seem to be worried much by raiders, but are permitted to live peaceably.

They are good hunters and fishers, and carry bows and arrows, as well as spears and clubs.

There is apparently another tribe of Jurs situated south of Rumbek. I am told that they speak a different language to the Jurs around Waw, and differ from them in appearance, being stout and squat like the Golos, Shiré's, and M'doggos.

COMPARISON OF BAHR-EL-GHAZAL TRIBES.

Dinka Nuher, Shilluk Jur.—Nearly black in colour. Their heads are long and narrow; their bodies tall and spare. They have very slender legs with hardly any calf. The men go naked and are given to smearing themselves with ashes. The hair is worn in elaborate head-dress in many cases, and sometimes coloured with ashes or clay. The central incisors of the *lower* jaw are *extracted*.

The women wear leather aprons in front and behind.

Weapons: chiefly spear, shield, and clubs.

They are warriors, cattle owners, fishermen. Ivory armlets and wristlets are worn.

Golo, Shiré, M'doggo, Belenda, Bonga.—These are not very black, their colour varies from chocolate to plum-colour. The head is round, and face broad. They are short, broad, and muscular, with heavy calves. A Λ -shaped notch is made between the central incisors of *upper* jaw.

They own no cattle, few sheep, and many chickens. The men wear loin-cloths, thus creating a demand for cloth, and necessitating weaving. The women are naked but for bunches of leaves.

Ivory armlets are not worn.

Their principal weapons are the bow and arrow, also spears to a less extent.

They differ from the A-Zandeh group in not being cannibals.

THE CIRCUMCISION CEREMONY AMONG THE NAIVASHA MASAI.

BY S. BAGGE.

A LARGE circumcision feast was recently held by the Masai at Naivasha. The tribes concerned in this ceremony were the L-Burgo, who are by far the strongest tribe of all Masai in English territory, the L-Gegonyuki, the L-Dalat le Kutuk, the L-Damat, and the L-Oitai.

During the 11th Masai year, which, so far as can be ascertained, is equivalent to the 8th in our reckoning, from the date of the last circumcision, it is the custom for the Masai elders and warriors to go in deputation to their paramount chief, who is at present Lenana, or, as it should be written, Ol-Onana. They state that the season is now approaching for another circumcision ceremony, and that they desire his permission to celebrate it.

Ol-Onana withdraws for a day or more to decide whether the season is suitable, and to select by means of necromancy a person to be the Ol-Otuno, or master of the ceremonies. The Ol-Otuno is second in command to the chief of the warriors, who is called Ol-Aigwanani, during the E-Unoto, or feast of the warriors. The present Ol-Aigwanani is called Ol-Egalishu.

I. *The E-Unoto Feast.*—The E-Unoto feast has been held for ages on Kinangop, a plain lying at the foot of the Kipipieri or Sattima hills, and stretching in a westerly direction towards Lake Naivasha.

Here two kraals are built. One is of immense size and is about $1\frac{1}{2}$ miles in circumference, large enough to accommodate all the people taking part in the feast. The other is a smaller one, and is used by the Ol-Otuno and his relations. It is built at a distance of some 300 yards from the larger one, and is called Os-Singira.

Bullocks, sheep, and milk are brought by the elders to the feast. The animals are slaughtered by a tribe of people called Andorobo, who also attend to the roasting of the meat. It is interesting to note that animal food is given to everyone except the warriors, who drink milk. Should, however, the latter desire animal food, they betake themselves to a spot some 400 or 500 yards distant from the kraal, where they eat by themselves.

At the feast the fat of the animal is distributed, and after being cooked, is rubbed by all, including the warriors, over their bodies. There is also another mixture of Ol-Karia (red mud) and fat, which they smear in weird and fantastic designs over their bodies and raiment. Males and females are thus decorated alike.

For several days they feast—eating, drinking, dancing, and singing. The elders meanwhile make honey wine, which they indulge in alone.

A curious distinction is made in the painting of those men who have killed a man in warfare. The Ol-Karia (red mud) on the left half of their body is mixed with water and not with fat, and on the right half they paint En-Doroto (white mud) and water. Both sides of their bodies are covered with a simple design made by drawing the nails of four fingers in any given direction in a wavy manner. These men also for the first four days dance alone, that is to say, unaccompanied by girls. Around their shoulders is a cape of ostrich feathers, on their heads either a cap of lion skin or a covering made of the feathers of the stork, and a cloth is arranged about their bodies.

The ninth day of the feast is called El-Merishu, and is important, as on this day it is imperative for every warrior to be present. A few elders, who cut up the meat, also take part in the feast.

II. *The Boys' Feast.*—The E-Unoto, or warriors' feast, lasts for three months, and after a short interval the boys who are to be circumcised hold a feast lasting for two days. This feast in 1903 took place near the Melana, or, as it is usually called, the Morendat River. The boys don their lion-skin caps or head-dress of ostrich feathers, the cape of vulture feathers, and paint their bodies with white clay mixed with mutton fat.

III. *Circumcision.*—After these two preliminary feasts, it is permissible to start the operation of circumcision. It has been, and still is, the custom of the fathers to have their sons circumcised, as far as is possible, in the same month as they themselves were. Thus the whole act of the circumcision ceremony may last for fifteen months. When the date has been duly decided on, the parent obtains the services of an Andorobo, who brings with him the necessary knife. The operator's fee is one sheep. The evening before the ceremony the boy is shaved over the whole body, with the exception of the eye lashes. The finger nails are trimmed, and he dons a garment of sheep skin from which all hair has been removed, and which has been coloured black. This is called the Ol-Kela. In this he sleeps. The next morning, before sunrise, he betakes himself to Lake Naivasha and bathes. Then returning to the kraal, he remains outside, shivering in a state of nudity until the sun rises.

At dawn the boy's mother brings an ox hide and spreads it on the ground in the kraal. All being now ready, the boy is placed on the hide in a sitting position with the legs apart and extended, one elder holds his arms from behind and another on his right side, the operator taking up his position between the boy's legs. The first step in the operation is the smearing of a stripe of white clay on the forehead and nose of the people taking part in the operation, and a white line to mark the place on the prepuce where the circumcision is to be performed. The prepuce is retracted and the operator scarifies each side of the *frenum* with the point of his knife, by means of which a certain amount of play is allowed. Inserting his finger between the upper surface of the glans and the prepuce he makes a transverse incision immediately below the part marked with the white paint, which is at a level of the corona glandis. Through this opening he

protrudes the *glans penis*, and by means of a thorn of the Ol-Oimoronyai tree so pierces the skin of the prepuce that it is unable to return to its former position; then, if this part of the prepuce appears to be too long, he cuts off a small portion from it, and throws it on the hide. When the operation is over the circumcisor washes the blood from the penis with a mixture of milk and water.

The hide is then taken by the mother and placed where the boy sleeps, and it is interesting to note that particular care is taken to guard the piece of the prepuce. It is believed that if anyone steals it, he can cause the boy's death.

After the circumcision one of the boy's relations pierces the neck of a bullock with an arrow, in the manner described by R. J. Stordy, Veterinary Officer of the Protectorate, in the *Veterinarian* of December, 1900, and collects the blood in a calabash. This the mother of the boy mixes with milk, and gives to her son to drink. For the rest of the day the boy rests.

On the following day the operator boils a branch of the Ol-Oimoronyai tree in a pot of water, and washes the boy all over with the decoction. A sheep is slaughtered and the fat is cooked and given to the boy to drink. The meat is cut up and roasted. This dish is called Ol-Mordati.

The youth then dons a cap made from a number of small birds through whose beaks a thread has been passed.

At the time of circumcision, should the youth show any sign of pain by wincing or making outcry, the onlookers, who are only males, beat his relations, and he is ostracised by his companions until the general circumcision ceremony is completed, after which he must kill a large bullock and invite the other boys to a feast.

No youth is permitted to carry any arms save a bow and arrows until he has been circumcised, but latterly this rule has not been strictly adhered to.

It is stated that no serious after effects ever occur.

IV. *Circumcision of Females.* 1. *Preliminary Ceremony.*—About the time of the girl's first menstruation, and usually immediately after it, the parents make arrangements for her circumcision. Friends gather to a feast held on the eve of the ceremony, and they bring with them presents of sheep, wine, etc. The feast consists of meat, milk, and honey wine.

2. *Operation.*—When the girl is to be circumcised, she is made to sit on an ox hide, and the operator, a female (usually the girl's own mother), removes the clitoris to a level with the surrounding surface. Women only are allowed to be present at this operation. The piece cut off is left on the ox hide, and is treated in the same manner as is the case in the male ceremony. A string of cowrie shells is fastened on to the girl's forehead, and she is now called Eng'-Aibartani, and considered eligible for marriage. No uncircumcised youth is permitted to have connection with a circumcised woman, but no objection exists to his having connection with any uncircumcised girl.

NOTES ON THE PHYSICAL CHARACTERISTICS OF THE ARAUCANOS.

BY R. E. LATCHAM, Local Correspondent of the Anthropological Institute
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[WITH PLATE VII.]

THE race, to which the name of Araucano has been given, formerly populated the whole of Chile from the desert of Atacama, in the north, to the Island of Chiloe in the south. Shortly after the Spanish conquest, however, their range became much more limited, and is now confined to the stretch of country between $37^{\circ} 40'$ and $39^{\circ} 28'$ S. latitude. There has been a great difference of opinion as to the origin of the term Araucano, which certainly did not exist at the time of the Spanish invasion. It is now generally considered to have been taken from the name of the district watered by the Carampangue, called by the natives Rauco, which means muddy water. Here Pedro de Valdivia met with the greatest resistance, and finally lost his life.

The names by which this race call themselves differ with the locality; *Moluches*, people of war, in the north; *Mapuches*, people of the land, in the provinces of Malleco and Cautin; *Pehuenches*, people of the pines, in the Andes valleys; and *Huilliches*, people of the south, in the provinces of Valdivia and Llanguihue.

It is popularly supposed that these tribes are dying out, but recent investigations show that there is a reaction in this respect, and that at the present time there is a tendency to increase.

At the end of the eighteenth century a census of the Indians south of the Bio Bio gave their numbers as more or less 95,000. In 1875 it was calculated that they numbered about 76,000. This difference was caused partly by the Indian war of 1868-1870, and partly by the ravages of the small-pox a few years before. The war of 1884, the cholera epidemic of 1887, and the introduction of alcoholic drinks after the final occupation of the Indian territory by the Chilean Government, helped to reduce their numbers still more; but during the past 15 years there has been a decided increase in the population, especially to the south of the Cautin. The number of Indians is now estimated by the president of the Indian Lands Committee to be about 73,000.

There is little propensity among this race to intermarriage with the Chileans; and if these latter represent an Indian stock, it is rather that of the centre and north of the country, dominated in turn by the Incas and Spaniards, than that

of the more warlike tribes of the south, who never submitted to the yoke of either.

Although the ethnology and linguistics of the Araucanos have frequently been sketched, very little has been said of their physical characteristics.

During a three years' residence in the province of Malleco and Cautin, I was able to obtain abundant material for a closer study, the result of which I propose to summarize.

The stature of the race may be classed as below the medium. D'Orbigny places it at 1620 mm. Guevara (*Hist. de la Civilizacion de Araucania*) gives for 50 men of different localities measured by him 1635 mm., ranging from 1490 mm. to 1720 mm. For 10 women the same writer gives 1437 mm. (1410-1470). My personal observations, taken from more than 200 individuals, place the mean height of the men between 1630 and 1635 mm. and of the women between 1420 and 1440 mm.

Those tribes which inhabit the coast regions and the district south of the Foltén (Mapuchés and Huilliches) are shorter than those of the Andes slopes (Pehuenches). The average height of the former is about 1620 mm., that of the latter 1660 mm.

The great difference noted in the stature of the two sexes is to be attributed to the early marriage and excessive work of the females. This same hard labour and also the polygamous habits of the race greatly limit their fecundity. Large families, even where there are several wives, are very rare. During my stay among the tribes, only on one occasion did I find a family of 7 children by one wife. Guevara gives the following list of 245 families:—

68 with 1 child,	10 with 6 children,
53 „ 2 children,	3 „ 7 „
55 „ 3 „	1 „ 8 „
33 „ 4 „	1 „ 9 „
20 „ 5 „	1 „ 10 „

or an average of 2.77.

In general appearance the Araucano is well knit and robust, with a tendency to stoutness. The limbs and extremities are short and thick, but not well proportioned, and the body is longer than the low stature would seem to indicate. The head appears larger than it really is, owing to the custom of wearing the hair long. The face is round and flat, the cheek bones being prominent; the nose broad and fleshy, sunken at its base and never aquiline; the eyes small and slightly lifted at their outer angle, the brow-ridges overhanging, and the glabella prominent; the mouth large, with long fleshy lips; the chin square and prominent; the teeth large, and generally well preserved; the ears medium, but well lobed.

The hair is black, coarse, and straight. By the men it is worn combed straight down, cut off just above the shoulders, and forming a fringe across the forehead; by the women it is parted across the centre of the crown and worn in two long tresses, in festival times being bound up with strings of silver beads.

The face and body are almost devoid of hair, and what little appears is carefully eradicated with silver pincers, even in the pubic region.

Some few Indians wear slight moustaches, but this custom is practically an innovation, and pertains only to those individuals who are in more direct contact with the Chilians.

The skin is of a reddish-brown colour: not so dark as the Indians of the north, and lighter in the mountain tribes than in those who inhabit the regions of the coast. To the south of the Imperial there is a tribe (Boroanos) much lighter in complexion than usual, among whom individuals of a ruddy tint and chestnut hair are not uncommon. I was unable to discover if this was due to intermixture with another race, but among the Indians themselves there was no record of such having taken place, and they ascribe the fact to climatic agencies.

The eyes are dark brown, nearly black, the sclerotic tawny, and frequently bloodshot.

During any exertion the skin of these Indians exudes a strong, disagreeable odour. This is common to both sexes, and is a normal condition, as they bathe frequently both in summer and winter. Guevara and other writers mention the low narrow forehead of this race, but the narrowness is more apparent than real, as the hair grows low over the forehead and temples, and on measuring the skulls we find that the contrary is the case, so that the inferior frontal diameter is exceptionally great.

Artificial deformation of the skull is unknown among these Indians, although common among the tribes of ancient Peru. Neither do they tattoo the face, body, or limbs. In former times they painted the face with white or red ochre on entering battle.

At one time it was common for the headmen to perforate the lobe of the ear for the insertion of large silver earrings, which were worn as a sign of authority; but this custom is dying out, or rather is left only to the women, who, as in most barbarous nations, are greatly addicted to personal adornment.

Although from his robust frame it would be supposed that the Araucano was extremely muscular, his bodily strength and stamina are inferior to those of European extraction or of the halfbreeds. This has been proved over and over again, both in the army and on the farm. As a peon he is deficient, and in long or forced marches the full-blooded Indian is the first to give out. Their lazy sedentary life probably accounts for this, as the work is done almost exclusively by the women.

Their physical wants are few, and those the surrounding country supplies in abundance. They live principally upon roots and such fruits as the enormous forests provide, an abundance of small game and wild fowl being always at hand.

But if wanting in physical energy their senses are acute. Their eyesight and hearing are remarkably good, and the facility with which they find their way through the trackless forests is little short of marvellous. These qualities were of the greatest service to them during their prolonged wars with the Spaniards.

CRANIOLOGY OF THE ARAUCANOS.

In describing the skulls of this race, we can only speak in general terms of the predominant form and characteristics, not taking into account the numerous individual variations. As a rule they are sub-brachycephalic or brachycephalic, hypsi- and akrocephalic in a high degree, phaenozygous, chamaeprosopic, platyopic, mesoseme, mesorhine, prognathous, and ellipsoid.

The first thing that one notices, at a casual glance, is the broad face and trochocephalic form of the skull, which looked at from any position presents a series of rounded surfaces. This is particularly noticeable in *Norma verticalis*. Taking the bregma as centre and as radius, the distance from this point to the point where the coronal suture meets the temporal crest, the circle described almost coincides with the posterior outline of the skull, the frontal portion being slightly elliptical. (See Plate VII, Fig. 2.)

There is also a marked prognathism, especially sub-nasal, and the supraciliary ridges and glabella are very pronounced.

The generality of the skulls are slightly phaenozygous, although in some the zygoma are barely seen, owing to the bulging of the skull immediately below the temporal crests, which helps to give it its globular appearance. The sutures are for the most part simple, and become synostosed in those individuals who pass the age of 50.

Norma lateralis (Plate VII, Fig. 1). Seen in this norma, the prominent supraciliary ridges and glabella become more apparent, as also the low retreating forehead. The posterior part of the skull is well rounded, although some few are a little flattened in the neighbourhood of the lambda.

The projection of the nasal bones is considerable, and the nasal notch deep. The malars have a considerable downward obliquity, which brings the lower border of the orbital cavity slightly forward.

The frontal and parietal eminences are not noticeable, being confounded in the general smooth outline. As a rule the skulls rest well on the mastoids, which are generally placed directly under the bregma.

The great altitude of the skulls is worthy of remark, and is manifest in this norma. This point will be noticed more particularly in another place.

Norma facialis (Plate VII, Fig. 3). The ophryo-alveolar diameter is unusually short in these skulls, which, with the great bizygomatic width, helps to give them their platyopic appearance. In no other race have I found the facial index so small.

The frontal is broad, but recedes in a gradual curve from the glabella to the bregma.

The orbits are usually rectangular and very oblique, the longer axes frequently meeting on the glabella and the shorter on the alveolar point. The fossae lacrymae are large and profound, and the bydacryc distance above the average.

The nasal bones are large and prominent, the apertura pyriformis heart-shaped, and the nasal spine only slightly developed.

The malars are full, but not particularly massive, and fall away under the orbits. In several skulls the infra-orbital suture is persistent, but this is not a constant characteristic, as in some prehistoric Chilean skulls. All the facial foramina are large.

Norma occipitalis. Here the globular form of the skull is again a salient feature. Few skulls present wormian bones, in which they differ greatly from Chilean skulls generally.

The greatest transverse diameter is usually found near the squamose edges of the temporals, and well forward of the parietal eminences, often falling directly over the mastoids.

Norma basialis. The foramen magnum usually presents an ovoid form, sometimes pyriform, but very seldom asymmetrical. The condyles are fairly large, the digastric grooves deep and wide, the styloids large and the mastoids generally massive. The prevailing form of palate is parabolic, and larger than in most civilized races, the teeth large and well preserved, but with a pronounced inward setting of the molars. The prognathism of the incisors is rather pronounced in the upper jaw, but is not noticeable in the living individual, owing to the long fleshy upper lip, which well covers the teeth.

Mandibles. Only four of the thirty-one skulls examined were accompanied

by the mandible, so that the characteristics here noted need not be considered as racial.

In all four the inward slant of the molars is marked, although the incisors are almost vertical.

Another curious formation noticeable in the whole series, is the interior bulging of the body of the mandible under the alveolars of the molars. This is caused by

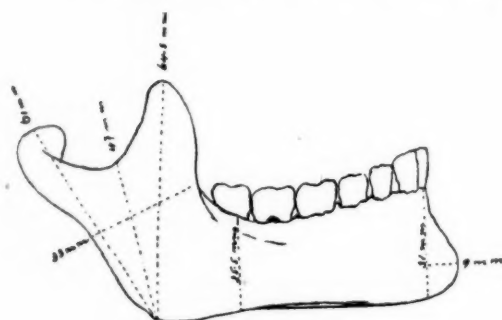


FIG. 1.—MANDIBLE.

Scale nearly one-half.

the whole dental plane lying well within the inner surfaces of the ascending ramus and is better shown by a diagram (Fig. 2) showing the vertical section at the last molar.



FIG. 2.—SECTION OF MANDIBLE.

Scale one-half.

The mandibles themselves are heavy, and square, with prominent chin and high symphysis.

The apophyses geini are strongly marked, and the interior gonian surface deeply scored.

The ascending ramus is narrow and the angle very obtuse.

Cephalic index. The race as a whole may be considered as sub-brachycephalic with an index of 79 or 80; while the variation lies between 70 and 88.

25 skulls	...	...	...	gave	79.6 (males)
6	"	...	...	"	80.1 (females)
20	"	(Guevara)	...	"	78.9 (mixed)
7	"	(Medina)	...	"	78.5 "
58	"	...	...	"	79.5 "

The 58 skulls here given may be classed as follows. (Broca's classification.)

Dolichocephalic	...	...	6 or 10.3 per cent.
Sub-dolichocephalic	...	...	10 or 16.9 "
Mesaticephalic	...	...	12 or 20.6 "
Sub-brachycephalic	...	...	15 or 26.1 "
Brachycephalic	...	...	15 or 26.1 "

By this table it is seen that while dolichocephaly is not uncommon, there is a decided tendency towards brachycephaly.

The average of the 7 skulls given by Medina (*Aborigines de Chile*) is lowered by the very dolichocephalic index of one of them (66.8). These skulls belonged to a collection in the Santiago Museum and are of doubtful origin.

My list gives 74 and 86.7 as the extremes of this index; Guevara's list gives 72.7 and 84.8.

Altitudinal Index. I have considered it advisable to give both the length, height-index and the breadth-height index, together with a mean of the two (Broca's mixed-height index) as being the best real exponent of this character.

	Length-height.	Breadth-height.	Mixed height.
25 skulls (males) ...	77.0	96.2	86.6
6 " (females) ...	77.6	95.3	86.4
4 " (Guevara) ...	77.6	96.4	87.0
Average ...	77.2	96.0	86.6

Frontal Measurements. It has frequently been stated, by different writers, that the Araucanos have narrow foreheads. I have already explained that this is due to the hair growing low over the brows and temples. The frontal, however, is unusually wide. In 31 skulls I found the minimum frontal diameter, measured immediately above the orbital ridges, to be 97 mm., 97.9 mm. for 25 males and 94.1 mm. for 6 females. Medina gives 91.1 mm. for 7 skulls, but I here repeat that there is reason to doubt the trustworthiness of this information.

Frontal Index.

25 skulls (male)...	...	69.3
6 " (female)	...	66.8
Average ...	...	68.8

Stephanic Index.

25 skulls (male)...	...	81.3
6 " (female)	...	80.4
Average ...	...	81.1

Facial Index. (Broca.) This index is extremely low; far less than in any race that has hitherto come under my notice. The reason of this lies in the very short ophryo-alveolar diameter while the face is unusually broad.

<i>Bi-zygomatic Diameter.</i>				<i>Ophryo-alveolar Height.</i>			
25 skulls (males)	...	136	mm.	25 skulls (males)	...	77.7	
6 „ (females)	...	127.6	„	6 „ (females)	...	70.5	
Average	...	...	134.4 „	Average	...	...	75.6

Facial Index.

25 skulls (males)	...	...	...	...	57.1 !
6 „ (females)	...	...	...	...	55.2 !
Average	...	...	...	...	56.7 !

Only in three instances did this index reach 62, the lowest in Broca's list, and corresponding to the extinct Tasmanians, while in 11 cases it did not attain to 54!

Cranial Capacity. The cerebral capacity of these skulls is not very high, being slightly inferior to the Chilians; although compared with Morton's list, they show a capacity superior to most American crania.

23 skulls (males)	...	...	...	...	1411 c.c.
6 „ (females)	...	...	...	...	1361 „
Average	...	...	...	...	1401 „

Guevara also gives the capacity of 4 skulls, 3 males 1419 c.c. and 1 female 1333 c.c.

The extremes are 1550 c.c. in a male and 1100 in a female skull, but the great majority lie between 1300 and 1400 c.c.

Prognathism. There is very little facial prognathism in this race owing to the outstanding glabella and orbital ridges. The sub-nasal prognathism is more pronounced, being more or less that of the Polynesians.

19 skulls (males)	...	...	...	...	76.2°
4 „ (females)	...	...	...	...	75.8°
Average	...	...	...	...	76.1°

FEMALES.

Measurement.	1	2	3	4	5	6	Average.	General Average.
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Length (maximum)	175	169	171	180	159	176	171·7	—
Breadth „	138	142	139	145	138	143	141	—
Frontal „	111	117	115	118	118	124	117·1	—
„ (minimum)	92	93	94	97	87	102	94·1	97
Altitude (basi-bregmal)	136	132	136	129	132·5	134	133·2	135·6
Circumference (horizontal) ...	504	—	—	—	472	512	496	—
„ (vertical)	495	—	—	—	476	502	491	—
Zygomatic diameter	127	130	128	130	122	129	127·6	134·4
Ophryo alveolar diameter	70	71	67	68	75	72	70·5	75·6
Orbital length	41	38	41	39	37	41	39·5	—
„ breadth	36	35	36	35	34	34	35	—
Nasal length	55	49	52	49	46	51	50·3	—
„ breadth	26	25	24	24	23	25	24·5	—
Cephalic index	78·8	84	81·3	80·5	86·7	81·2	82	80·1
Length-height index	77·7	78·1	79·5	71·6	83	76·1	77·6	77·1
Breadth „ „	98·5	92·9	97·8	89	96	93·7	95·3	96
Mixed „ „	93·1	85·5	88·6	80·3	89·5	84·9	86·4	86·5
Stephanic index	82·8	79·4	81·7	82·2	74	82·2	80·4	81·1
Frontal index	66·6	65·5	67·6	66·9	63	71·3	66·8	68·8
Facial „ (Broca)	55·1	54·6	52·3	52·3	61·4	55·8	55·2	56·9
Orbital „	87·8	92·1	87·8	89·7	91·9	82·9	86·3	85·3
Nasal „	47·2	51	46·1	49	50	49	48·7	48·6
Capacity	c.c. 1,455	c.c. 1,390	c.c. 1,325	c.c. 1,490	c.c. 1,100	c.c. 1,395	c.c. 1,361	c.c. 1,401
Prognathism (sub-nasal)	70°	74°	75°	78°	—	—	74·2°	75·8°

MALES.

Measurement.	1	2	3	4	5	6	7	8	9	10	11
Length (maximum)	mm. 180	mm. 171	mm. 185	mm. 174	mm. 175	mm. 175	mm. 184	mm. 193	mm. 182	mm. 178	mm. 171
Breadth „	141.5	142.5	141	136	149	147	139	143	141	141	141
Frontal „	116	117	116	114	119	125	122	120	128	128	120
„ (minimum)	95	97	97	94	92	96	98	103	97	101	100
Altitude (basi-bregmatic)	136	130	131.5	134	129	137	134	139	135	143	136
Circumference (horizontal)	513	501	522	496	520	515	527	539	537	527	491
„ (vertical)	501	487	503	501	488	500	512	530	518	519	488
Zygomatic diameter	137.5	131	137.5	133	135	143	135	135	137.5	133	137
Ophryo alveolar diameter	78	81	74	70	70	73	68	72	82	81	82
Orbital length	44	43	41	45	40	42	42	45	44	39	44
„ breadth	34	35	33	36	35	37	35	36	39	36	37
Nasal length	52.5	54	53	46	54	54	52	53	50	48	50
„ breadth	24	24	25	26	25	26	26	28	24	24	24
Cephalic index	78.6	83	76.2	78.1	85.1	84	75.5	74	77.4	79.2	82.4
Length-height index	75.5	76	71	77	73.7	78.2	72.8	72	74.1	80.3	79.5
Breadth „ „	96.1	91.2	93.2	98.5	86.5	93.2	96.4	97.2	95.7	101.4	96.4
Mixed „ „	85.9	83.6	82.1	87.7	80.1	85.7	84.6	84.9	84.9	90.8	87.9
Stephanic index	81.9	82.9	83.6	82.4	77.3	76.8	80.3	85.8	75.7	78.9	83.3
Frontal index	67.3	68.3	68.8	69.1	61.7	65.3	70.5	72	68.8	71.6	70.9
Facial „ (Broca)	56.7	61.8	53.8	52.6	51.8	51	50.4	53.3	52.3	60.9	59.8
Orbital „	77.4	81.4	80.5	80	87.5	88	83.3	80	90	92.3	84.1
Nasal „	45.7	44.4	47.1	56.5	46.3	48.1	50	52.8	48	50	48
Capacity	c.c. 1250	c.c. 1418	c.c. 1,325	c.c. —	c.c. 1,335	c.c. 1,340	c.c. 1,325	c.c. 1,380	c.c. 1,535	c.c. 1,550	c.c. 1,363
Prognathism (sub-nasal)	70°	79°	68°	70°	74°	78°	76°	72°	84°	78°	—

MALES.

12	13	14	15	16	17	18	19	20	21	22	23	24	25	Average.
mm. 176	mm. 178	mm. 171	mm. 172	mm. 178	mm. 187	mm. 172	mm. 174	mm. 172	mm. 181	mm. 168	mm. 180	mm. 168	mm. 180	mm. 179·2
137	136	133	141	141	150	150	138	139	146	136	141	137	145	141·3
116	113	121	127	123	120	131	118	111	119	119	125	119	127	120·5
98	93	102	105	101	96	100	94	91	102	99	100	93	105	97·9
132	133	132	133	137	144	137	137	142	143	133	134	139	145	136·2
501	498	484	505	537	533	510	—	—	—	—	—	—	523	514·7
498	500	493	500	518	530	500	—	—	—	—	—	—	512	505
133	133	132	138	133	140	139	139	135	139	131	143	133	140	136
87	83	80	88	81	78	75	74	72	80	78	82	76	78	77·7
41	43	42	41	42	42	40	43	42	41	41	43	43	41	42·2
34	36	35	35	34	39	34	37	34	36	33	38	38	36	35·6
53	55	48	50	51	57	50	54	54	53	54	55	53	49	52
25	25	26	24	26	26	25	24	26	27	27	25	24	25	25·2
77·8	76·4	77·7	81·9	79·7	80·2	86	79·3	80·8	80·6	80·1	78·3	81·5	80·5	79·6
75	74·6	77·1	77·9	83	77	79·6	79·1	82·5	79	73·1	74·4	82·7	80·5	77
96·3	97·7	99·2	94·3	97·1	91	91·3	99·2	102·1	97·9	97·3	95	101·4	100	96·2
86·7	86·1	88·1	86·1	90	84	85·4	89·1	92·3	88·4	85·2	84·7	92	90·2	86·6
84·4	82·3	84·3	82·7	82	80	76·3	79·6	82	85·7	83·2	80	78·1	82·6	81·3
71·5	68·3	76·6	74·4	71·6	64	66·6	68·1	65·4	70	72·7	70·9	67·8	72·3	69·3
65·8	62·5	60·6	69·7	60·9	55·7	54	53·2	53·3	57·5	59·5	57·3	57·1	55·7	57·1
82·9	83·7	83·3	85·3	80·9	81·5	85	88	83	90·2	84·7	93	93	90·2	85·1
47	47·2	54·1	48	51	45·6	50	44·4	48·1	50·9	50	45·4	45·3	51	48·4
c.c. 1,400	c.c. 1,363	c.c. 1,527	c.c. 1,520	c.c. 1,490	c.c. 1,460	c.c. 1,350	c.c. 1,300	c.c. 1,510	c.c. —	c.c. 1,363	c.c. 1,475	c.c. 1,380	c.c. 1,510	c.c. 1,411
—	78°	78°	78·5°	85°	78·5°	—	—	—	—	75°	80°	72°	76°	76·2°

CEPHALIC INDEX.

Guevara's List.		Medina's List.		Capacity (Guevara).		
1	mm. 84.8	1	mm. 73.4	1	male	c.c. 1,400
2	81.5	2	66.8	2	„	1,433
3	84.4	3	88.8	3	„	1,425
4	77.8	4	88.2	4	female	1,333
5	72.7	5	75.9			
6	84	6	76.4			
7	83.4	7	79.7			
8	73.5	Average 78.5				
9	80.2					
10	80					
11	84.8					
12	75.2					
13	76.8					
14	74.8					
15	83.1					
16	78					
17	80					
18	83.9					
19	78.1					
20	81					
Average 78.9						

Guevara's List.					
	1	2	3	4	Average.
Length (maximum)	mm. 167	mm. 178	mm. 167	mm. 180	mm. —
Breadth „	131	144	141	140	—
Height (basi-breg.)	130	136	129	142	134.2
Length-height index	77.8	76.4	77.2	78.9	77.6
Breadth	99.2	93.9	91.4	101.3	96.4
Mixed	88.5	85.1	84.3	90.1	87

Description of Plate VII.

FIG. 1.—Norma Lateralis.

A—A = 136.2 mm.
B—B = 180 mm.
C—F = 77.7 mm.
D—F = 69.9 mm.
E—F = 8.8 mm.

FIG. 2.—Norma Verticalis.

A—A = 180 mm.
B—B = 141.3 mm.
C—C = 136 mm.
D—D = 97.9 mm.

FIG. 3.—Norma Facialis.

A—A = 136.2 mm.
B—B = 97.9 mm.
C—C = 141.5 mm.
D—D = 136 mm.
A—top of orbits = 77.7 mm.

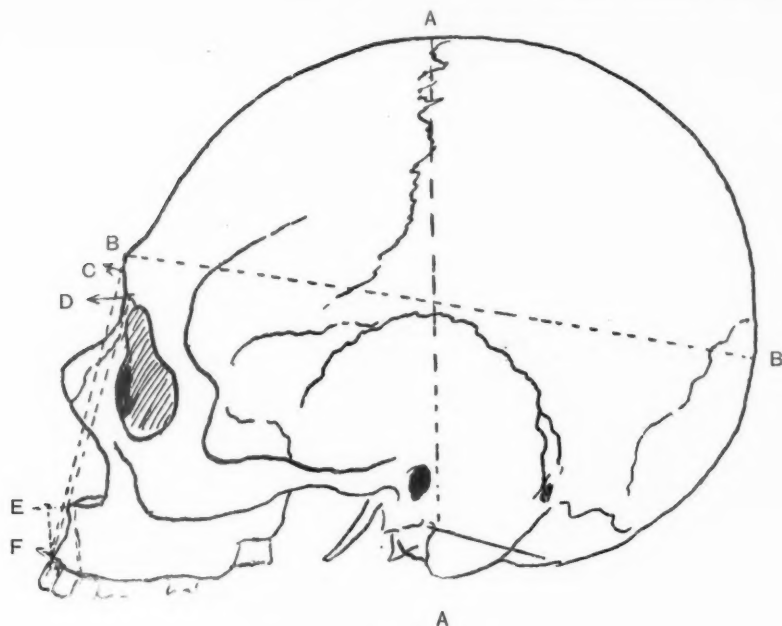


FIG. 1. *Norma Lateralis.*

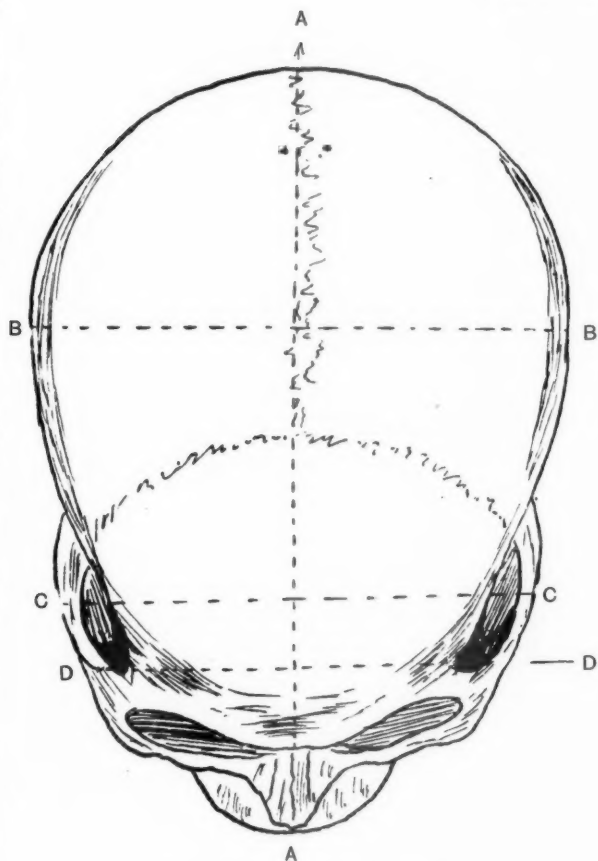


FIG. 2. *Norma Verticalis.*

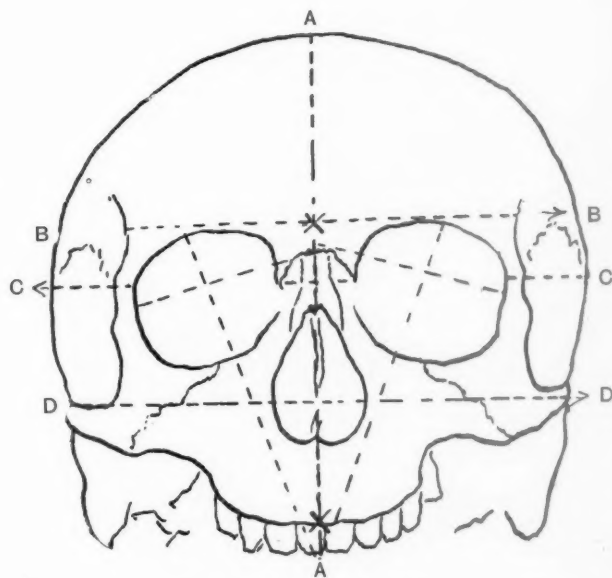


FIG. 3. *Norma Facialis.*

TYPICAL ARAUCANO SKULL.

Scale $\frac{1}{2}$.

PHYSICAL CHARACTERISTICS OF THE ARAUCANOS.

LES SIX RACES COMPOSANT LA POPULATION ACTUELLE DE L'EUROPE.

The Huxley Lecture for 1904.

PAR LE DR. J. DENIKER, Président de la Société d'Anthropologie de Paris.

[PRESENTED OCTOBER 7TH, 1904.]

[WITH PLATES VIII-XIII.]

Il y a sept ans, je publiais les premiers résultats de mes recherches sur les races européennes: c'était le fruit de plusieurs années de travail. Depuis, je continuais mes recherches, mais, par suite de diverses circonstances, l'ouvrage n'avancait pas avec la même rapidité que le nombre des années qui s'accumulaient sur ma tête. Or je vois que peut-être ma vie ne sera pas assez longue pour pouvoir terminer et mener à bonne fin cette entreprise, et je profite de l'occasion que m'offre d'une façon si gracieuse l'Anthropological Institute of Great Britain and Ireland pour exposer ici, au moins en résumé, le résultat final auquel je suis arrivé dans ce travail méticuleux, quitte à donner plus tard la justification complète de tout ce que j'avance, avec les chiffres détaillés et les citations abondantes à l'appui. Ce résumé je ne pouvais le faire dans des meilleurs conditions que sous l'invocation de la mémoire de Huxley et dans le pays où les études des races Européennes ont pris naissance.

Il ne faut pas oublier en effet, que c'est Huxley qui le premier, dans sa classification des "races humaines" parue en 1870,¹ établit l'existence des deux races distinctes parmi les Européens: la race des bruns (Mélancroïdes) et celle des blonds (Xanthocroïdes). D'autre part il est juste de rappeler que les premières études comparatives sur la somatologie des Européens ont été enfantées en Angleterre où, il y a exactement un demi-siècle, Beddoe² commençait ses recherches, qui aboutissaient en 1893 à la publication de la première étude d'ensemble sur les races de l'Europe.³ Je dois ajouter que quelque années après paraissaient les premiers travaux de Broca sur les races de la France, où mon maître exposait déjà ses idées sur les races de l'Europe.⁴ Je remercie donc l'Anthropological

¹ Huxley, T. H., "On the geographical distribution of the chief modifications of mankind," *Journal Ethnological Society*, London, new series, vol. ii, 1870, pp. 404, av. carte.

² Beddoe, J., "On the ancient and modern ethnography of Scotland." *Proc. Soc. of Antiquar. of Scotland*, Edinburgh, vol. i, 1854, p. 243. Il publia ensuite des études sur les Germains, les Juifs, les Irlandais, les Italiens, les Anglais, les Ecossais, les Belges, etc.

³ Beddoe, John, "The anthropological history of Europe," Rhind lectures for 1891, London, 1893, av. cartes.

⁴ Broca, Paul, "Sur l'ethnologie de la France." *Mémoires de la Soc. d'Anthropologie de Paris*. Série 1, vol. i, 1860, p. 1, av. carte. Voy. aussi ses mémoires sur les origines Européennes (1864), sur les Celtes, les Bretons, etc. (1868).

Institute, en même temps, et de l'insigne honneur qu'il m'avait fait en m'appelant à parler devant vous ce soir, et de l'occasion qu'il m'offre de réunir dans un seul sentiment de vénération et d'estime le nom de Beddoe à ceux de Huxley et de Broca, deux illustres savants dont peuvent être fiers les deux pays qui leur ont donné naissance et que tant de liens rattachent l'un à l'autre dans une entente cordiale.

Au moment où je publiais mes premières notes préliminaires¹ on admettait généralement que les races qui composent les populations si diverses de l'Europe sont au nombre de trois. En effet, à côté de la race blonde, dolichocéphale et de grande taille, que l'on appelait Kymrique, Germanique, Européenne, etc., et de la race brune, brachycéphale et de petite taille, qu'on désignait sous le nom de Celtique, Ligure, Celto-Slave, Touranienne ou Alpine, on reconnaissait alors l'existence d'une troisième, mise en évidence, si je ne me trompe, par l'anthropologiste belge bien connu, le professeur Houzé, dès 1881, et gratifiée du nom de la race Méditerranéenne. Cette dernière devait comprendre les dolichocéphales bruns de l'Europe méridionale, mais on n'était pas tout à fait d'accord pour lui attribuer soit une grande ou soit une petite taille. En fin de compte c'est la petite taille qui lui a été reconnue, grâce aux matériaux accumulés peu à peu, surtout par les savants italiens.

L'énoncé de mon opinion relatif à l'existence de six ou même peut-être de dix races² différentes existant au milieu des populations européennes actuelles a donc dû forcément rencontrer une certaine opposition, et dans un ouvrage d'ensemble, fort bien fait, sur les races de l'Europe, paru peu après mes notes, W. Ripley,³

¹ Deniker, J., "Les races européennes." *Bulletin de la Soc. d'Anthropol. de Paris*, 4 sér., vol. iii, pp. 189 et 291, 1897; et "Les races de l'Europe," *l'Anthropologie*, t. 9, Paris, 1898, p. 113, av. carte.

² Voici le tableau de ces races que je me permets de reproduire afin de préciser l'exposition qui va suivre :—

				Race Principale.	Race Secondaire correspondante.
Races blondes	de grande taille	... dolichocéph.	...	Nordique	... Sub-nordique.
	de petite taille	... sous-brachycéph.	...	Orientale	... Vistulienne.
Races brunes	de petite taille	{ dolichocéph.	...	Ibéro-Insulaire.	
		{ brachycéph.	...	Occidentale.	
	de grande taille	{ sous-dolichoc.	...	Atlanto-Méditer...	Nord-Occident.
		{ brachycéphale.	...	Adriatique	... Sub-Adriatique.

³ Ripley W., *The Races of Europe*, New York, 1899, in 8°, av. un appendice bibliographique et nombres planches et cartes. Presque en même temps paraissait le premier de mes études détaillées, destinées à montrer quelle était la base de mes déductions (Deniker, J., "Les races de l'Europe," 1, *L'indices céphalique en Europe*. Association française pour l'avancement des Sciences, Congrès de St. Etienne, Paris, 1899, in 8°, av. 1 carte), et mon manuel d'anthropologie (Deniker, J.), *The Races of Man*, London, 1900, av. fig. et cartes, où je précisais (p. 325 et suiv.) mes idées sur les races de l'Europe.

tout en donnant ma classification dans un appendice à son volume, n'a pas cru devoir se ranger à mon opinion, et continua à représenter les peuples européens comme étant composés seulement de trois races déjà citées. Suivant lui, mes races ne sont que des types existant actuellement il est vrai, mais issus, toujours d'après lui, du mélange des trois races primordiales. Je crois que c'est là plutôt querelle de mots que de notions et d'idées. Sur quoi en effet se sont basés tous les savants qui ont soutenu l'existence des trois races européennes seulement; sur les différences des caractères tirées de la stature, de la couleur des yeux et des cheveux, et surtout de la forme cranienne, différences que l'on avait constatées jusqu'alors d'après les études sur les crânes ou sur les sujets vivants particulièrement en Europe centrale, en France, en Italie et dans les Iles Britanniques. Eh bien, ai-je procédé autrement? Non. Je me base également sur des données de même nature, avec cette différence seulement, qu'elles sont beaucoup plus nombreuses et s'étendent non plus sur une portion de l'Europe occidentale seulement, mais sur *toute* l'Europe, sauf quelques points presque négligeables désormais.

Dans son remarquable ouvrage, Ripley me reproche de n'apporter aucune preuve tirée de l'hérédité et de la descendance pour établir mes six races Européennes. Mais les savants qui m'ont précédé n'ont pas donné davantage de ces preuves pour établir leurs trois races. Les arguments en leur faveur que Ripley a si habilement réunis dans le sixième chapitre de son livre ne me paraissent guère suffisants. Ils se réduisent à ceci: on retrouve dans les données historiques et archéologiques la mention des races blondes et brunes dans les régions où on les trouve encore aujourd'hui; de plus, l'étude des ossements préhistoriques ou protohistoriques confirme l'existence de ces races.

Or rien n'est moins fragile que ce genre de preuves. Les citations que l'on tire des écrits des auteurs de l'antiquité et du moyen âge sont tellement vagues et fluctuantes qu'il est impossible d'y reconnaître une race quelconque; en tout cas elles sont complètement muettes quant à la forme de la tête. Si vous y trouvez la mention de "blonds" par exemple, rien ne vous indique que ces blonds avaient le crâne rond ou allongé; par contre, les ossements préhistoriques ne vous renseignent que sur la forme du crâne sans donner aucune indication sur la pigmentation des sujets vivants auxquels ils appartenaient. Ils ne fournissent aussi qu'une base très chancelante pour établir la taille de ces sujets ou la forme de leur nez. De plus, ces ossements sont encore si peu nombreux qu'il est absolument impossible de généraliser en se basant sur leur étude, surtout en ce qui concerne la taille.

Je ne veux pas dire par là que ce que l'on sait de ce côté soit sans valeur; au contraire, je suis le premier à reconnaître l'importance des recherches sur les ossements préhistoriques; seulement je pense qu'elles ne pourront donner des indications précises que dans un avenir plus ou moins éloigné, quand on pourra réunir des séries suffisantes pour établir par exemple la taille moyenne d'après la formule de Manouvrier.

Quelques sépultures préhistoriques, comme celles par exemple de l'âge du fer en Scandinavie, pourront peut-être aussi nous fournir quelques renseignements, sinon sur la pigmentation des yeux et de la peau, au moins sur la couleur des cheveux, dans certains cas spéciaux, quand ces cheveux sont conservés sur les cadavres momifiés grâce à des conditions particulières de gisement. Mais pour cela la constatation seule de la couleur des cheveux ne suffit pas, car cette couleur peut très bien se transformer du pur brun au pur blond, après un séjour très-prolongé sous la terre, comme le montrent certaines momies égyptiennes.

Il faudrait donc étudier les cheveux préhistoriques au microscope, d'après la méthode de Minakov,¹ pour voir suivant la forme et la couleur des granulations du pigment, ainsi que suivant leur groupement, si les cheveux étaient bruns ou blonds pendant la vie de l'individu. De plus, il faudrait considérer la *nature* des cheveux, car tous les blonds n'ont pas la même nature de cheveux, et il est loin des boucles blondes dorées et soyeuses que l'on rencontre si fréquemment en Angleterre et en Hollande, aux cheveux droits, raides, d'un blond filasse, si fréquents en Russie ou en Finlande, et qui diffèrent à leur tour des cheveux légèrement ondulés, d'un blond cendré, si caractéristiques pour certains Scandinaves.

On peut voir par cette petite digression combien nous sommes encore loin de connaître l'ensemble des caractères physiques des races préhistoriques ou historiques de l'Europe. J'appuie sur le mot *ensemble*, car c'est d'après la réunion de plusieurs caractères qu'on peut établir une race et non seulement d'après la forme crânienne.

On a été trop longtemps hypnotisé en anthropologie par les données craniologiques et l'on a souvent oublié que pour établir la parenté des races entre deux groupes ethniques quelconques, il ne suffit pas de constater qu'ils présentent la même forme de la tête ou simplement le même indice céphalique, sans s'inquiéter des autres caractères. Aussi me permettrai-je de renverser l'expression de Ripley, d'après laquelle mes races ne seraient que des "*types*," et dire que les anciennes trois races européennes ethniques sont des "*types crâniens*" et non pas des races. Pour qu'ils deviennent des races il leur faudrait joindre d'autres caractères, tirés de l'étude de l'ensemble du corps : taille, pigmentation, forme de la face, du nez, conformation du tronc, etc. Beddoe, avec sa perspicacité habituelle, a si bien senti cette nécessité que dans son livre² il emploie cette expression : "We have now three craniometrical, if not racial, areas in Europe."

En somme pour établir mes races je me suis servi de la même méthode que mes prédécesseurs ; seulement, j'ai opéré sur les données beaucoup plus vastes et mieux contrôlées. D'autre part, pas plus que moi, mes prédécesseurs n'ont fourni et ne pouvaient fournir des arguments bien solides tirés de l'hérédité, et cela faute de documents suffisants.

D'ailleurs la reconnaissance d'un nombre de races européennes supérieur à trois était en l'air, pour ainsi dire, avant que je ne l'aie formulée en 1897. Sans parler

¹ Minakov, P., "Volossy," etc. (Les cheveux au point de vue anthropologique), *Roussky antropologhitchesky*, etc. (*Journal russe d'Anthropologie*), Moscou, 1900, p. 83.

² *The Anthropological History of Europe*, p. 109.

des cinq races européennes de Kollmann, établies encore en 1880, mais sans beaucoup de précision et sur les caractères craniens seulement¹ on peut citer Beddoe qui, déjà en 1893, dit à la suite de la phrase citée plus haut sur les "races craniométriques" qu'il faut peut-être en admettre une quatrième, brachycéphale, comprenant des Finnois et les Lapons, qui sont en effet des Européens d'aussi longue date que les Germains ou les Slaves. D'autres auteurs comme Collignon, par exemple, admettaient encore en 1881 une race "Lorraine" distincte des trois races classiques, etc.²

D'ailleurs, Ripley lui même n'est pas éloigné d'accepter au moins deux de mes races comme suffisamment caractérisées ; en parlant de la race Atlanto-Méditerranéenne, il la considère comme une subdivision de sa race Méditerranéenne et il admet parfaitement l'existence d'un *type* authentique (non issu des mélanges) en Bosnie, Serbie et Dalmatie, qu'il identifie avec ma race Adriatique, tout en voulant expliquer par le mélange de la race "teutonique" sa présence dans la vallée du Rhône-Saône.³ Il ne reste en somme que la race "Orientale" qui nous sépare. Le savant américain ne donne pas de raisons pour son refus de reconnaissance à ce sujet, mais comme il propose de fondre ma sous-race ou variété "Vistulienne" avec la race Orientale, il faut en déduire que la raison mise en avant pour celle-là suffit aussi pour l'Orientale. Or cette raison la voici : Ripley admet comme moi qu'il existe en Pologne et dans les pays voisins un "type" blond, très petit de taille et sous-brachycéphale (caractères de ma sous-race Vistulienne), seulement au lieu de voir dans ce type une subdivision ou variété locale de ma race Orientale, il le considère comme le résultat des mélanges de la race "teutone," grande dolichocéphale et blonde, avec les Juifs. Tous ceux qui connaissent un peu les rapports sociaux existant en Pologne entre Juifs et Chrétiens seront étonnés de cette explication. Les mariages entre Juifs et Chrétiens sont dans ce pays plus rares que dans n'importe quelle autre région de l'Europe où ils ne sont déjà pas si fréquents. Mais admettons qu'il en est autrement, que les Juifs se marient aussi fréquemment avec les Chrétiens qu'entre eux, alors une autre question se pose : comment se peut-il que les Juifs qui ne constituent que 9 à 18 pour cent de la population de la Pologne (voy. la carte d'Andree reproduite par Ripley dans son livre, p. 372), aient pu abaisser aussi profondément (de 1 m. 69 à 1 m. 61) la taille de 82 à 91 pour cent des représentants de la race "Teutonique" ? Et dans le cas où cela serait possible, comment se fait-il que les mêmes Juifs, représentant la même fraction de la population dans les provinces de la Russie occidentale (Vilno, Kovno, Grodno, Volhynie), y ont laissée intacte la taille des

¹ Kollmann, J., "Beiträge zu einer Kraniologie der europäischen Völker," *Archiv für Anthropologie*, vol. 13, 1880-81, pp. 79 et 179 ; et vol. 14, 1882-83, p. 1.

² Collignon, R., "Le race Lorraine," *Bulletins de la Soc. des Sciences de Nancy*, 1881, p. 3.

³ *I.c.*, p. 601. L'argumentation dont se sert ici Ripley prouve combien est arbitraire le criterium des mélanges en général. Si les Burgonds (Germains, et pas consequent présumés être de race "Teutonique") ont contribué à relever la taille des "Celtes" bruns et petits de cette vallée, pourquoi alors les autres représentants de la même race n'ont-ils pas fait autant dans le centre de la Bavière et du Grand Duché de Bade où la taille est restée petite ?

mêmes représentants de la race teutonique, qui s'y maintiennent avec une stature avantageuse de 1 m. 65 et 1 m. 68 à l'exception de 3 ou 4 districts ? (*Voy.* la carte d'Anoutchin reproduite par Ripley à la p. 348 de son livre.)

Malgré ces quelques observations je dois reconnaître que la différence des vues entre Ripley et moi n'est pas aussi grande qu'on pourrait le croire. Le savant américain l'admet d'ailleurs lui même, et puisque l'occasion se présente je dois dire qu'il ne s'agit ici que de mes races proprement dites. Mes sous-races que j'assimile avec lui à ce qu'il appelle les "types" ne sont pas en cause ici. Ces variétés ou subdivisions de mes races principales ont été mises en avant par moi uniquement pour montrer certains faits demandant une explication, et je crois pour ma part avoir trouvé certaines explications qui peut-être réduiront le nombre de mes sous-races à deux ou trois.

En dehors de Ripley, plusieurs autres savants ont admis que ma race Occidentale (Wettstein, Krassnoff), que ma race Adriatique (J. Gray, Pantoukhoff). Plusieurs savants russes reconnaissent l'existence de ma race "Orientale" et ma classification des races Européennes fut même introduite dans un manuel de géographie en Allemagne par l'anthropologiste bien connu Emile Schmidt,¹ avec cette seule modification, qu'il donne comme Ripley le nom de "type" à mes races, et substitue le nom de "type accessoire" (Nebentypus) à mon terme de sous-race ou race secondaire.

Je demande pardon à mes auditeurs et à mes lecteurs de m'être étendu si longtemps sur la critique et les appréciations de mon œuvre. Mais cela était nécessaire pour montrer que, malgré quelques réserves et objections, plusieurs savants admettent aujourd'hui l'existence de six grandes unités somatologiques européennes que je signalais pour la première fois en 1897. Qu'on les appelle "races" ou "types" peu importe dans l'état actuel de l'Anthropologie, où la notion de race est si peu définie. Toujours est-il qu'on ne peut nier à l'heure qu'il est l'existence de six "unités somatologiques" principales parmi les populations actuelles de l'Europe. A l'avenir de décider si ces six unités descendent de 6, 5, 3 ou même d'une seule race primordiale; actuellement nous n'avons aucune indication précise à ce sujet, pas plus qu'on n'en avait il y a 20 ans pour les races de chiens ou autres animaux domestiques.

Il ne faut pas conclure de ce que je viens de dire que depuis l'apparition de mes premières notes je me suis exclusivement occupé de la façon dont seraient accueillies mes déductions par le monde savant. Loin de là, je me suis appliqué à recueillir de nouveaux documents, et déjà dans mon travail détaillé sur l'indice céphalique en Europe² j'ai complété certaines données de ma classification.

Depuis, des travaux importants se sont produits un peu partout en Europe; en Scandinavie, en Alsace, en Angleterre, en Bulgarie, en Portugal et surtout en Russie. Les blancs qui existaient sur mes cartes se sont remplis petit à petit et aujourd'hui je puis dire qu'à quelques rares exceptions près, je possède des documents anthropologiques sur la taille, la pigmentation et l'indice céphalique

¹ *Voy.* Scobel, A., "Geographisches Handbuch," Leipzig, 1898, p. 184. ² *I.c.*, p. 97.

de tous les pays de l'Europe. Les seules régions sur lesquelles les renseignements manquent complètement sont : le Montenegro et quelques districts de la Turquie d'Europe (Novi-Bazar, sud de l'Albanie, Andrinople) et de la Russie (pays des Cosaques d'Oural, quelques points du Caucase). Parmi les régions où les renseignements sont incomplets, il faut citer la Prusse, pour laquelle il n'existe que des renseignements relatifs à la pigmentation des enfants ; la Roumanie, la Serbie, et le Luxembourg, pour lesquelles je ne possède que le chiffre global de la taille des recrues et quelques autres renseignements incomplets ; et enfin certaines régions de la Russie centrale (provinces de Kalouga, d'Orel, de Nijni) et méridionale (Bessarabie, provinces de Stavropol et de Kharkov, pays des Cosaques du Don), sur lesquels il n'y a que des chiffres relatifs à la taille.

A noter aussi les renseignements insuffisants en ce qui concerne l'indice céphalique et la pigmentation pour la Hongrie ; les trop maigres renseignements que l'on a sur l'indice céphalique pour la Suisse ; sur l'indice céphalique et la taille pour le Wurtemberg, la Saxe, le Palatinat et pour quelques petits Etats de l'Allemagne du Nord. Enfin on ne connaît pas encore l'indice céphalique des populations du Sud-est de la Hollande et, j'ai le regret de le dire, de celles de plusieurs points des Iles Britanniques.

Je dois remarquer aussitôt, que des travaux importants s'accomplissent actuellement ou vont s'accomplir prochainement dans la plupart des régions que je viens d'énumérer. Le professeur G. Schwalbe a proposé au 34^e congrès des Anthropologistes allemands, tenu l'année dernière à Worms, tout un programme d'études somatologiques sur les habitants de l'Empire Allemand, en exhortant vivement ses compatriotes à ne pas laisser persister longtemps les taches blanches sur les cartes anthropologiques.¹ En Roumanie des études intéressantes ont été faites par Mr. Pittard, dont le travail d'ensemble va paraître prochainement.² En Russie, sous l'impulsion d'Anoutchine et du Dr. Ivanovsky, qui vient de publier un travail remarquable, synthétisant tout ce qui a été fait jusqu'à ce jour dans le domaine de la somatologie des populations russes,³ plusieurs jeunes anthropologistes sont en train de compléter les lacunes que présentait jusqu'à présent l'étude des races de la Russie. Presque chaque numero du *Roussky antropologhitchesky Journal* apporte quelque travail nouveau sur un des nombreux peuples ou régions qui entrent dans la composition du vaste Empire de Russie. Enfin, dans les Iles Britanniques les comités de l'Association pour l'avancement des sciences et le comité anthropométrique irlandais vont sans doute bientôt apporter de

¹ Schwalbe, G., "Ueber eine umfassende Untersuchung der physik.-anthropolog. Beschaffenheit der jetzigen Bevölkerung des Deutschen Reiches," *Correspondenz-Blatt. d. Deutsch. anthropol. Gesellschaft*, 1903, No. 9.

² Jusqu'à présent M. Pittard n'a publié que quelques petites notes sur les Albanais, sur les Grecs et sur les Tsiganes, qu'il a eu occasion de mesurer pendant son premier voyage en Roumanie.

³ Ivanovsky, A., "Ob antropologhitcheskom," etc. (La composition anthropologique de la population de la Russie), *Izvestia*, etc. (*Bulletins de la soc. des amis des sc. nat. de Moscou* vol. 105 (formant le vol. 22 de la section anthropologique), in 4^e, 1904.

nouveaux renseignements pour compléter ceux qu'on possède déjà grâce à ces organisations. Quant à moi, je m'efforcerai de vous donner un tableau très général des résultats de mes recherches, résultats qui diffèrent un peu de ceux que j'ai exposés en 1897-98, en raison même de l'accumulation des matériaux nouveaux parus depuis dans les travaux importants et remarquables que je ne puis, à mon grand regret, citer ici en détails. Je me contenterai de rappeler, dans le cours de mon exposé, ceux qui n'ont pu être mentionnés ni dans l'excellente bibliographie, qui accompagne le volume de Ripley¹ et qui donne tout ce qui a paru jusqu'en 1899 en matière de somatologie européenne, ni dans la bibliographie, qui fait suite à mon mémoire sur l'indice céphalique en Europe,² et qui s'arrête également à l'année 1899.

Mais avant de commencer mon exposé je tiens à dire de suite que les nombreuses recherches faites depuis la publication de mon mémoire (1897-99), tout en apportant des modifications de détails et des compléments précieux, ne modifient en rien le tableau général de la caractéristique des 6 races européennes; elles précisent leur distribution géographique sans en déranger les grands traits que j'ai indiqués jadis; et, chose qui me paraît avoir une certaine importance, elles ne révèlent l'existence d'aucune race nouvelle. Tout au plus autoriseraient-elles à incorporer une ou deux de mes races secondaires dans une race principale ou à mieux interpréter la signification de ces sous-races.

Ceci dit je passe à la revision des 3 principaux caractères des races européennes en commençant par l'indice céphalique. En ce qui concerne ce caractère important, voici les corrections qu'il faudra apporter à ma carte, publiée en 1899 et jointe à mon mémoire déjà cité.³ Je vais me servir plus loin de ma nomenclature pour l'indice céphalique, expliquée dans ce même mémoire et que je reproduis ici :

Hyperdolichocéphales : indice sur le vivant	..	...	73-75.9
Dolichocéphales	...	...	76-77.9
Sous-dolichocéphales	...	...	78-79.9
Mésocéphales	...	...	80-81.9
Sous-brachycéphales...	...	...	82-83.9
Brachycéphales	...	...	84-85.9
Hyperbrachycéphales	...	...	86-88.9

Les indices sur le crâne sont toujours augmentés de 2 unités.

Pour le *Portugal* les travaux de Sant Anna Marquez⁴ et de A. G. Lopez⁵ modifient ma carte en ce sens que la moitié septentrionale de ce pays n'est pas uniformément hyperdolichocéphale, mais qu'il y existe, à l'ouest de Beira, sur le

¹ Ripley, W., *A selected bibliography of the anthropology and ethnology of Europe*, Boston, 1899.

² *L.c.*, p. 101.

³ Je donnerai prochainement les détails de ces corrections; je ne puis citer ici que les traits principaux sans donner beaucoup de chiffres.

⁴ *Estudo de Anthropometria portuguesa*, Lisboa, 1898.

⁵ *Os Beiros* (thèse), Lisboa, 1900.

littoral, une zone dolichocéphale qui la rattache à la région nord-ouest de l'Espagne ayant le même indice (76·2). Par contre, les hyperdolichocéphales semblent être plus fréquents que ne l'indiquait ma carte dans le sud du pays.

En France les travaux de Bouchereau sur les habitants du plateau central¹ et de Papillault sur les Parisiens² ne modifient presque rien dans mes conclusions. Les crânes anciens que le premier de ces auteurs a mesurés, lui ont démontré l'augmentation progressive, depuis le quaternaire jusqu'au 19^{me} siècle de l'indice céphalique dans la région.³ Suivant lui les brachycéphales auvergnats sont des immigrants récents, venus du sud-ouest et du sud sur le Plateau Central. Ce fait est démontré par ma carte où l'arrondissement d'Issoire, le plus méridional du département du Puy-de-Dôme (le cœur du Plateau Central), est hyperbrachycéphale, comme le département du Cantal situé encore plus au sud, tandis que le reste du Puy-de-Dôme est seulement brachycéphale.

Pour la Suisse, les travaux récents de Wettstein⁴ et de Pittard⁵ sur les crânes des Grisons, et ceux de Schrenck⁶ sur les crânes du canton de Vaud, tout en confirmant la brachycéphalie extrême des habitants des Grisons, soulèvent quelques questions sans les résoudre. Dans les deux régions on constate que l'indice céphalique sur les vivants est plus faible que sur les crânes. Ce phénomène tient-il aux différences des époques historiques dont proviennent les crânes ou aux différences des localités où les mesures ont été prises, il est difficile de le discerner. Il est possible que l'indice s'est abaissé dans les deux régions par suite des immigrations des dolichocéphales venus du nord, mais pour l'affirmer il faudrait savoir si les habitants du nord de la Suisse (au nord de la ligne Neuchâtel, Berne, Lucerne, Coire) se rattachent par la forme de la tête aux sous-brachycéphales de l'Allemagne du sud, ou bien s'ils servent de trait d'union, de soudure, entre les blocs hyperbrachycéphales qui se trouvent immédiatement à l'ouest et à l'est, en France et dans le Tyrol. Mais pour cela nous manquons complètement de documentation.

En ce qui concerne les *Iles Britanniques* le chiffre de l'indice céphalique des Irlandais 79·1 publié par Browne⁷ d'après les mesures sur 165 hommes, diffère très peu de celui que j'ai donné déjà (78·5) d'après les 422 observations combinées de différents auteurs. Quant à la distribution par localités en Irlande, le seul travail

¹ *L'Anthropologie*, vol. ix, 1900, p. 691.

² *Bulletins et Mém. de la Soc. d'Anthropol. de Paris*, 1902, p. 392.

³ L'augmentation de l'indice céphalique dans le cours des siècles paraît être un fait presque général. Matiegka l'avait constatée pour la Bohême, Niederle pour les Slaves en général, Bogdanov pour la Russie centrale, etc. Et, sans sortir des limites de la France, il suffira d'ajouter le fait suivant d'après E. Pittard (*Le Globe* de Genève, 1900, vol. 39) : 165 crânes savoyards anciens (d'Annecy et Chambéry) ont un indice de 82·8, correspondant à 84·8 sur le vivant seulement ; tandis que les crânes modernes de la Savoie et de la Haute Savoie offrent des indices moyens de 86 et 87 (87 et 88 sur le vivant).

⁴ *Zur Anthropologie . . . des Kreises Disentis*, Zurich, 1902, av. planches.

⁵ *Bulletin Soc. Anthropol. de Lyon*, vol. 19 (1901), et 21 (1903).

⁶ *Bulletin Soc. Vaudoise des Sci. Nat.*, vol. 34 (1898), p. 1, et vol. 35 (1899), p. 1, av. pl.

⁷ *Proceedings Roy. Irish Academy*, ser. 3, vol. v, p. 269, Dublin, 1899 (b).

nouveau que je connaisse, celui du même Browne,¹ permet de prolonger la zone dolichocéphale du pourtour de la baie de Galway jusque dans les îles de Garumna et de Lettermulen (indice céph. 76.9) situées plus au nord-est et dont les habitants passent pour les Irlandais les plus purs. A noter aussi que J. Gray² signale une série du nord-ouest de l'Irlande qui contiendrait 50 pour cent de brachycéphales ; mais il ne donne aucun détail à ce sujet.

Le travail d'un des plus anciens et des plus estimés craniologistes du Royaume Uni, j'ai nommé Sir William Turner,³ ainsi que le mémoire de J. Gray et J. Tocher⁴ sur Aberdeenshire, me permettent de remplir quelques blancs sur ma carte pour l'Ecosse. Le principal mérite de ces travaux c'est d'avoir révélé l'existence des régions peuplées par des mésocéphales (ind. céph. 80-81) dont la présence en masse dans les Îles Britanniques n'a été encore signalée jusqu'alors que sur un petit point dans le nord-ouest de l'Irlande. Ces régions sont : le comté de Fife, l'East-Lothian et certains points dans l'est d'Aberdeenshire. De plus Sir W. Turner nous apprend que les îles Shetland sont également peuplées de mésocéphales, et, malgré le nombre restreint, cinq seulement, des crânes étudiés, je crois qu'il faut néanmoins, signaler ce fait car il en explique un autre, qui paraissait anormal jusqu'alors : je fais allusion à la présence des sous-brachycéphales dans la plus méridionale des îles *Faroer*, signalée par moi d'après Arbö en 1897 et confirmée depuis par Jorgensson.⁵ Cette existence de brachycéphales, jointe à la mésocéphalie constatée dans l'île moyenne des *Faroer* par N. Annandale,⁶ est à rapprocher de l'existence des mésocéphales en nombre, et d'une forte proportion de brachycéphales sur la côte est de l'Ecosse, dans les îles Shetland, et surtout sur la côte ouest et sud-ouest de la *Norvège*, où d'après les récents travaux de l'infatigable Arbö⁷ la zone mésocéphale, avec quelques points sous-brachycéphales, s'étend beaucoup plus loin dans l'intérieur des terres et le long des côtes que ne le représentait ma carte.

Il ressort de ces rapprochements que presque toutes les côtes de la partie septentrionale de la Mer du Nord et de la partie méridionale de l'Océan Arctique sont occupées par une population mésocéphale ou sous-brachycéphale qui tranche sur la grande zone dolichocéphale du nord de l'Europe.

Cette population, est elle formée de descendants métissés des brachycéphales

¹ *Proceedings Roy. Irish Academy*, ser. 3, vol. v, p. 223, Dublin, 1899 (a).

² *Man*, vol. ii, No. 41 (p. 52), London, 1902.

³ "A Contribution to the Craniology of the People of Scotland," part 1, Anatomical, *Transactions of the Royal Soc. of Edinburgh*, vol. 40, part 3, p. 547, 1903, av. planches.

⁴ *Journ. Anthropol. Inst. of Great Britain and Ireland*, vol. 30, 1900, p. 104, av. planches.

⁵ *Anthropologiske undersøgelser fra Faeroerne* (Anthropologia Faeroica) (thèse), Kobenhavn, 1902. L'auteur de ce travail, qui est une mine inépuisable de renseignements, a mesuré 2,000 sujets, c'est-à-dire le deux tiers de la population de l'île ; malheureusement il ne donne pas de moyennes, mais les brachycéphales et les mésocéphales (à 80 d'indice et au dessus sur les vivants) forment de 44 à 52 pour cent de sujets examinés, suivant le sexe.

⁶ *Proceedings Royal Soc. of Edinburgh*, vol. 25 (1903-4), p. 2.

⁷ *Ymer*, Année 1900, no. 1, Stockholm, p. 25, 2 cartes.

de l'âge de bronze dont on trouve les restes en Angleterre et en Norvège et que Gray¹ veut assimiler à ma race Adriatique? Cela est bien probable, mais pour trancher la question de nouvelles recherches s'imposent, surtout dans les îles écossaises et peut-être au Danemark.

En Suède, le travail magistral de G. Retzius et C. Fürst² a mis en pleine lumière la dolichocéphalie forte et presque uniforme de tous les Suédois. En effet l'indice céphalique, dont la moyenne générale pour tout le pays est de 77.6 (sur le vivant, d'après 45,688 sujets mesurés), se maintient partout dans les limites de la dolichocéphalie sauf la province de Lappland, tout-à-fait au nord où l'influence finnoise et lapone se font sentir (*i.e.* 79.5), et sauf aussi les districts côtiers où l'indice s'abaisse jusqu'à la sous-dolichocéphalie (entre 78 et 79 d'indice). On peut donc peut-être étendre à la Suède ce que j'ai dit à propos de la présence des mésocéphales sur les côtes de la Norvège et de l'Ecosse. Si je dis maintenant qu'une note de Berkhan sur la population de Brunswick,³ inaperçue par moi en 1897, jointe au travail de Kruse⁴ sur la population d'Andernach (au nord de Coblenz) et au mémoire de l'inlassable A. Weisbach sur les Allemands de la Carinthie,⁵ épuisent tout ce que j'ai appris de nouveau sur la somatologie des *populations Allemandes* dans ces quatre dernières années, sans modifier sensiblement ma carte, j'aurais terminé avec l'indice céphalique en Europe occidentale.⁶

Quand à l'Europe orientale, les travaux remarquables de F. Westerlund⁷ pour la Finlande, l'œuvre magistrale du Dr. Wateff⁸ pour la Bulgarie, les notes sur certaines *populations Balkaniques* publiées par le Dr. E. Pittard,⁹ le mémoire sur les *Slovènes* dû encore au Dr. Weisbach,¹⁰ les notes qui accompagnent l'album du Dr. Janko¹¹ représentant les *Hongrois* des environs du lac Balaton, et enfin les travaux des divers savants sur les populations de la Russie si bien résumés

¹ *Man*, 1902, No. 41, p. 52.

² *Anthropologia Suecica. Beiträge zur Anthropologie der Schweden*, Stockholm, 1902, fol., av. nombr. tableaux et cartes.

³ In *Beiträge zur Anthropologie Braunschweigs*, Festschrift, Braunschweig, 1898.

⁴ *Bonner Jahrbücher*, 1900, Heft 105, p. 144.

⁵ *Mitteilungen d. Anthropolog. Gesellschaft in Wien*, nouv. sér., vol. 20, 1900, p. 79, cartes.

⁶ Il faut y ajouter, cependant, pour la Hollande, la note du Dr. Kohlbrugge sur les pêcheurs de l'île Marken (dolichocéphales) et de la côte qui lui fait face (sous-brachycéphales), *Handelingen Nederl. Anthropol. Vereeniging*, La Haye, N. 2, Juin, 1904, p. 33.

⁷ "Studier i Finlands Antropologi," *Fennia*, vol. 18, No. 2, et vol. 20, No. 2; Helsingfors, 1901-2, av. cartes et tableaux.

⁸ Nombreuses Notes publiées dans *l'Archiv f. Anthropologie*, 1900 à 1903, et un mémoire résumant l'ensemble de ses recherches dans les *Bulletins et Mém. Soc. Anthropol. de Paris*, 1904, p. 437 (avec carte, fig. et une petite note supplémentaire de moi-même, p. 458).

⁹ Étude Anthropologique des Grecs d'Europe (Dobrodja), *Revue de l'École d'Anthropologie*, 12e année, Paris, 1902, No. 12; "des Albanais," *ibid.*, No. 7; "des Bulgares," *Bull. Soc. Anthropol.*, Lyon, 1901.

¹⁰ *Mitteilungen Anthropolog. Gesellschaft in Wien*, vol. 33 (3e sér. vol. iii), 1903, p. 234.

¹¹ *Magyar Typusok, Magyarische Typen*, Budapest, 1900.

dans l'ouvrage déjà cité de A. Ivanovsky¹ modifient et surtout complètent plus sensiblement ma carte pour cette partie de l'Europe que pour l'ouest du Continent.

Je résumerai ces modifications en donnant maintenant le tableau d'ensemble de l'indice céphalique en Europe.

Des quatre *grandes régions* céphalométriques que je déterminais en 1897, trois restent presque intactes dans leurs limites ; une *région dolichocéphale avec enclaves mésocéphales* dans le nord-ouest ; une *région plus dolichocéphale* dans le sud-ouest de l'Europe et dans la partie orientale de la presqu'île Balkanique ; enfin une *région très brachycéphale* au centre de l'Europe occidentale et dans la partie ouest de la presqu'île Balkanique. Quant à la 4^e région, celle des *sous-brachycéphales* de l'est on peut aujourd'hui assez nettement la délimiter comme occupant seulement l'intérieur de la Russie occidentale, les côtes russe et prussienne de la Baltique, ainsi que la Pologne étant occupées par les mésocéphales, et les populations slaves de la Russie orientale étant aussi mésocéphales. L'ancienne région 4 (la Russie et l'ancienne Pologne) se fractionne donc en *trois régions nouvelles* : une sous-brachycéphale au centre et deux mésocéphales à l'ouest et à l'est de cette dernière.

Examinons maintenant à part chacune des six régions ainsi nouvellement établies. La *première région* (dolichocéphale avec enclaves mésocéphales) comprend les Iles Britanniques et la Scandinavie, sauf le littoral de la partie septentrionale de la Mer du Nord, où la mésocéphalie et même la sous-brachycéphalie apparaissent avec évidence. (Voy. p. 190.) Cette région s'étend aussi sur presque toute la côte sud de la Mer du Nord, en Hollande (où il y a même des îlots sous-brachycéphales) et en Allemagne. La côte nord du Pas-de-Calais et la côte ouest de la Baltique lui appartiennent aussi, mais seulement par places, par quelques îlots au milieu des mésocéphales, notamment en Normandie, sur la côte sud-ouest de la Finlande (population suédoise) et parmi les Finnois occidentaux (Esthes et Lives).

Les populations occupant cette région diffèrent des populations du sud (2^{me} région) non seulement par leur indice céphalique plus modéré (76 à 79), mais aussi par plusieurs autres caractères : haute taille, pigmentation claire, etc.

La *deuxième région* (dolichocéphale) comprend la péninsule Ibérique, le sud de l'Italie, les îles de la Méditerranée occidentale, et se prolonge, par taches isolées, reliées entre elles ou simplement entourées par des zones mésocéphales en Aquitaine, sur le littoral du golfe du Lion et de la Mer Ligure. Puis elle reparait dans la partie est de la presqu'île Balkanique : en Bulgarie (entremêlée d'îlots mésocéphales dans le nord), dans les parties orientales de la Macédoine et de la Grèce, et peut-être dans la plaine du bas-Danube, en Roumanie. Elle occupe aussi presque toute la Transcaucasie. Les populations de cette région sont franchement

¹ En dehors de ce travail j'ai profité de quelques autres qui n'y sont pas analysés, mais je ne mentionnerai que le principal et le plus récent mémoire de Tchepourkovsky sur la somatologie des femmes Grand-russiennes (*Rusky Antropol. Journal*, 1903, p. 13). Les indices céphaliques qu'on y trouve sont comparables avec ceux que l'on a pour le reste de la Russie.

dolichocéphales (indice céphalique de 73 à 78), et pour la plupart brunes et de taille peu élevée ou moyenne.

La troisième région (très brachycéphale, indice céphalique 84 à 88) se présente sur la carte comme un immense triangle, dont le sommet, quelque peu tronqué, s'appuie sur le pays Basque, et dont la base se trouve au voisinage du 10^e degré de longitude est (Greenwich), entre les monts de la Thuringe au nord (près d'Erfurth), et le point où les Appenins se rapprochent le plus de l'Adriatique au sud (près d'Ancone). Cette région triangulaire, entamée par places (en Bavière, dans le Wurtemberg, dans le Gr. duché de Bade, en Suisse, dans la Haute Italie) par des îlots mésocéphales, envoie à l'est deux appendices, deux bandes très brachycéphales, dont l'une couvre la Bohême, les Carpathes et la Transylvanie, tandis que l'autre se dirige au sud-est, comprenant la Vénétie, la Slavonie-Croatie, la Bosnie, la Dalmatie, la Macedoine orientale, et probablement la Serbie et l'Albanie, car ses éclaboussures ont été constatées jusqu'en Bulgarie occidentale, et l'ouest de la Grèce. Entre ces deux appendices du nord-est et du sud-est se trouve une région qui n'a été explorée, au point de vue anthropologique, que dans sa partie occidentale (Autriche allemande). Là, on constate une zone sous-brachycéphale (indice céphalique 82-83) qui s'enfonce comme un coin (dont la pointe serait au voisinage d'Innsbruck) dans le triangle brachycéphale et détermine, en quelque sorte, la direction initiale de ses deux appendices. Cette zone est délimitée approximativement par le cours du Danube au nord, par celui de la haute Drave au sud, et comprend quelques îlots mésocéphales (en Carinthie, dans la Basse Autriche, etc.). Les recherches ultérieures, si désirables, en Hongrie et en Roumanie, nous diront s'il faut voir dans les habitants de cette zone les descendants mélangés des hyperdolichocéphales de la période hallstattienne (car c'est là que se trouvent Hallstatt et tant d'autres stations du premier âge du fer); ou bien si ce sont des frères de race, aux caractères atténués, des dolichocéphales de la partie est de la péninsule Balkanique; ou bien encore s'ils sont des sujets à formes craniennes analogues à celles que l'on rencontre en Russie.

A ces trois régions de l'Europe occidentale et Balkanique il faut joindre les trois régions craniennes de la Russie. La première région *mésocéphale* occupe tout le littoral de la Baltique, à partir de 64° de latitude N. environ (en Finlande) jusqu'à Dantzig, et probablement plus à l'ouest encore jusqu'à l'embouchure de l'Oder (en Prusse). Elle se propage fort loin dans l'intérieur en Finlande, où l'indice augmente en allant du sud-ouest au nord-est jusqu'à s'élever à la sous-brachycéphalie parmi les Kvenes de la province d'Uléaborg et dans l'est de la Finlande peuplé de Karéliens. Elle pénètre aussi très loin dans la Pologne occidentale (à l'ouest de la Vistule). Quant au reste de la Russie, le faible bombement de terrain (de 200 à 500 m. d'altitude) qui s'étend au milieu de ce pays du nord au sud, depuis les collines de Valdaï jusqu'au voisinage de Kharkov (50° lat. N.) et qui forme la ligne de partage des eaux entre les bassins du Volga, de la Dunna, du Dnieper et du Don, y constitue la frontière naturelle entre les sous-brachycéphales à l'ouest et les mésocéphales à l'est. Il est difficile de dire

par quelles formes craniennes est occupé le bombement lui-même, qui n'a pas moins de 800 kilomètres de longueur de N. au S., avec une largeur moyenne de 200 kilomètres, car c'est la partie de la Russie la moins connue au point de vue anthropologique ; les seules régions qui y ont été étudiées sont le district de Toula (sous-brachycéphale) et la partie nord de la province de Koursk (sous-brachy- et méso-céphale). Quoiqu'il en soit, on peut nettement distinguer à l'ouest de ce plateau une vaste région *sous-brachycéphale* (2^{me} de la Russie) avec quelques îlots brachycéphales dans le sud des Provinces de Pskov, Novgorod et Tver, ainsi que dans la dépression des marais de Pinsk et dans quelques districts de la Russie méridionale. Tandis qu'à l'est s'étend dans tout le bassin du Volga (sauf la province de Tver) et du Don, une *région mésocéphale* (3^{me} de la Russie) au milieu de laquelle on remarque une multitude d'îlots dolichocéphales ou mésocéphales des populations Finnoises (Votiaks, Mordva, Tcheremis, Zirianes, etc.) et des îlots sous-brachycéphales des populations turques (Tatares du Volga, Tchouvaches, Bachkirs, etc.). L'extrême nord de la Russie paraît être peuplé, moitié par les représentants de la première région, moitié par ceux de la seconde. Pour le sud de la Russie les documents manquent. Les vrais brachycéphales, ne reparaissent que sur la bordure sud-est de la Russie (Kirghiz) et dans l'est de la Ciscaucasie (Lesghi, populations turques du Caucase, etc.)

Passant maintenant aux caractères tirés de la *taille*, et de la *pigmentation*, je serai plus bref, car ayant sous les yeux les deux cartes représentant la distribution de ces caractères on s'en rendra mieux compte que par de longues descriptions. Avant d'exposer ce qui concerne la *taille*, il faut dire que les données rapportées sur ma carte et provenant, sauf quelques exceptions, des mesures sur les conscrits, sont uniformisées le plus possible. On sait, en effet, que dans différents pays on n'admet comme soldats, ou comme on dit, on n'*incorpore* dans l'armée, que des conscrits ayant dépassé un certain minimum de taille.¹ D'autre part l'on sait aussi que certaines observations donnent la taille de *tous* les conscrits, y compris ceux qui sont au-dessous de la taille réglementaire. Les chiffres fournis par ces derniers ne sont donc pas comparables, sans corrections, avec ceux que fournissent les premières observations faites seulement sur les incorporés. Il fallait uniformiser tout cela. Voici comment je m'y suis pris. J'ai constaté tout d'abord, en comparant les travaux de M. Champouillon (1868) en France, de P. Ricardi (1882) en Italie, de Lebedev (1894) en Russie, de Key (1885) et de Forssberg (1899) en Suède, de Lorenz (1895) en Suisse, etc., que la taille augmente pendant une année de 1 centimètre au moins chez 75 à 85 pour cent de jeunes gens de 20 à 21 ans. Ensuite (après 22 ans) elle augmente aussi légèrement (de $\frac{1}{2}$ à 1 cent) jusqu'à 25-28 ans environ, mais cette augmentation est compensée plus tard dans la masse de la population par la diminution de la taille (de $\frac{1}{2}$ à 1 cent) chez les hommes ayant dépassé 50 ans. Par suite de cette compensation on peut considérer la taille des jeunes

¹ Ce minimum est, ou était (car récemment on a aboli ce criterium dans plusieurs pays), de 1 m. 57 à 1 m. 67 en Allemagne (suivant les corps de troupes), de 1 m. 57 en Suède, de 1 m. 54 à 1 m. 56 en Espagne, de 1 m. 54 en France, de 1 m. 55 en Autriche, etc.

gens de 22 ans comme représentant la véritable *taille moyenne* d'une population donnée.

Ceci établi, reste à savoir comment déterminer la taille de toute la population à cet âge étant donné que presque toutes les mesures de taille sont fournies en général par les mesures des recrues de 20 à 21 ans, tantôt avec exclusion de ceux qui sont au dessous de la taille réglementaire (sélection) tantôt en comprenant ces derniers. Enfin il faut aussi considérer les données, plus rares il est vrai, obtenues par les mesures sur les soldats de 22 à 23 ans, c'est-à-dire sur des individus sélectionnés.

Or, d'après les calculs auxquels je me suis livré pour différents pays, il m'a été possible d'établir que la taille des incorporés (c'est-à-dire des conscrits reconnus bons pour le service, ayant tous la taille au-dessus de la limite réglementaire) représente à peu de chose près, la taille moyenne de la population mâle adulte dans laquelle ils sont pris. En effet, d'une part ces incorporés, âgés en général de 20 à 21 ans, vont encore grandir de 1 centimètre environ et par conséquent ont une taille de 1 centim. inférieure à celle des adultes; mais d'autre part leur taille moyenne est environ de 1 centimètre supérieure à celle des jeunes gens de leur âge en général, par ce qu'ils sont sélectionnés (les individus de petite taille étant exclus de leur nombre). Ces deux différences de taille, agissant dans le sens contraire, se compensent mutuellement, et la taille de ces incorporés *représente* pour ainsi dire ce que deviendra au terme de son accroissement (22 ans) la taille de *tous* les jeunes gens de leur âge d'une population donnée, qu'ils soient au-dessus ou au-dessous de la taille réglementaire exigée pour le service militaire.¹

En conséquence de ces calculs je me suis posé les règles suivantes :—

- (1.) *Ajouter un centimètre à la taille moyenne quand elle est donnée d'après les mesures sur tous les conscrits ou appelés, y compris ceux qui ont la taille au-dessous du minimum réglementaire, pourvu qu'ils soient âgés de 20 à 21 ans.*
- (2.) *Rien ajouter à la taille moyenne quand elle est donnée d'après les mesures sur les incorporés ayant la taille au-dessus du minimum réglementaire et âgés de 20 à 21 ans; ou bien quand les mesures*

¹ Voici comme exemple le calcul que j'ai fait pour la France. D'après les chiffres du recrutement de 1859-68 la taille moyenne du contingent était de 1653 mm. Les exemptés pour défaut de taille (c'est-à-dire ceux qui ont moins de 1 m. 56) représentaient alors 5.3 pour cent des hommes examinés. Supposons donc que nous avons 100 de ces hommes du recrutement de 1859-68; 95 pour cent de ces hommes (contingent) ont la taille de 1 m. 65; le reste (5 pour cent.) doivent avoir en moyenne 1 m. 50, car ce groupe comprend des hommes ayant de 1 m. 56 à 1 m. 45 (limite raisonnable pour un adulte normal français). La taille moyenne de 100 hommes réunis (95 + 5) sera donc de 1642 mm. Mais comme il a été démontré par Champouillon pour les soldats français de cette époque, 78 pour cent de ces jeunes gens vont grandir d'un centimètre jusqu'à 22 ans; et comme d'autre part on a tout lieu de croire que les non-incorporés (5 pour cent) vont grandir encore au moins d'autant, sinon plus, la vraie moyenne pour les 100 hommes arrivés au terme de leur croissance (22 ans) serait donc de 1642 mm. + 10 mm. = 1652 mm. presque juste égale à la moyenne du contingent, 1653 mm.

sont prises sur les civils de 22 ans et plus, pourvu que ceux-ci ne forment pas un groupe sélectionné.

- (3.) *Retrancher un centimètre* à la taille moyenne quand elle est donnée d'après les mesures des soldats âgés de 21 à 23 ans.

Ces trois règles souffrent quelques exceptions. En Suisse, par exemple, où les moyennes sont données d'après les mesures sur les conscrits de 19 ans qui grandissent de 2 à 3 centim. jusqu'à 22 ans, j'ai dû ajouter 2 centimètres, tandis qu'en Suède-Norvège je me suis guidé d'après les calculs d'Arbö, de G. Retzius, de Hultkranz, etc.

Il est inutile d'insister sur tous ces détails, il suffira de dire que ma carte représente à un demi-centimètre près la taille moyenne de la population mâle adulte de l'Europe.

Mes chiffres ainsi corrigés ont été empruntés principalement¹ aux travaux de Fonseca Cardoso et Sant' Anna Marquez pour le Portugal; d'Oloriz et Aranzadi pour l'Espagne; de la commission de recrutement de J. Bertillon, Collignon, Hovelague, Hervé, Lapouge, Atgier, Bouchereau pour la France; de Houzé pour la Belgique; de la commission statistique² pour la Hollande; de Beddoe, de Haddon, de Brown, de Gray et de comités de l'association britannique (rapporteurs Garson, Roberts et Rowson), et du "Survey" anthropométrique de l'Irlande, pour le Royaume-Uni; d'Arbö pour la Norvège; du même auteur, de Jorgensen et d'Annandale pour les Faroër; de Hultkranz, G. Retzius et C. Furst pour la Suède; de O. Ammon, Meisner, Uexkül, Ranke et Kruse pour l'Allemagne; de S. Brandt pour l'Alsace-Lorraine; de Bedot et Chalumeau pour la Suisse; de Goehlert, Haller, Janko, Kopernicki, Mayer et Weisbach pour l'Autriche-Hongrie; de Livi pour l'Italie; d'Anoutchin, Elissieff, Elkind, Malief, Maïnof, Zakrzewski, Talko-Hryncewicz, Ivanovsky pour la Russie; de Ghiltchenko, Pantioukhof, Svidersky et Chantre pour le Caucase; de Westerlund pour la Finlande; de Wateff pour la Bulgarie; de Pittard pour les Grecs, Albanais, etc., etc.

De plus, j'ai pu profiter des matériaux inédits, notes manuscrites ou documents officiels non mis dans le commerce, grâce à l'obligeance de mon ami le Dr. Collignon pour la France; du général Van der Burcht-Van Lichtenberg, et mon ami le Dr. Ten-Kate pour la Hollande; du Dr. Ferraz de Macedo pour le Portugal; du Dr. Soren-Hansen pour le Danemark; du Professeur Vitzu et Dr. Felix³ pour la Roumanie; du Professeur Jouyowitch et du Dr. Lazarievitch⁴ pour la Serbie.

¹ Je ne donnerai des indications bibliographiques que pour les travaux qui n'ont pas été mentionnés précédemment dans ce mémoire ou dans les bibliographies de Ripley et de moi-même citées plus haut.

² "Jaarcifers," etc. ("Annuaire statistique des Pays-Bas. Métropole"; 1894) s' Gravenhage; 1895, p. 20.

³ "Rapport général à supra. . . . Serviciului sanitar ale regatului Romaniei pe anul 1893" (*Rapport du service sanitaire du royaume de la Roumanie*), Bucuresci, 1894, p. 40.

⁴ "Srpski Arhiv za celokupno lekarstvo," *Archive Serbe de la médecine*, t. 24, Belgrade, 1890, p. 18.

Je ne vais pas reproduire ici les chiffres de moyennes pour chaque Etat ou région,¹ je me contenterai d'indiquer comment se répartissent les grandes coupures de ces tailles moyennes espacées de 2 centim. et demi (un pouce) chacune.

Comme je l'ai déjà dit en 1897, il n'y a pas en Europe de populations de petite taille (au dessous de 1600 mm. ou 63 pouces) si l'on s'en tient à la nomenclature générale proposée par Topinard. Par contre, les hautes tailles sont assez abondantes et nous comptons en Europe la population possédant la plus haute stature de l'humanité jusqu'à présent connue, j'ai nommé les Ecossais et plus spécialement les Highlanders (moyenne de 1 m. 765, soit 5 pieds et 10 pouces). Dans ces conditions je vais me servir du terme *taille moyenne* pour les tailles de 1650 à 1675 mm. (5 pieds et 5 pouces à 5 pieds 6 pouces) et appeler tout ce qui est au dessous "*petites tailles*" et tout ce qui est au dessus "*grandes tailles*."

En jetant un coup d'œil sur la carte jointe à ce mémoire on s'aperçoit que les hautes statures sont surtout bien représentées dans le nord-ouest du Continent. La totalité de la population des Iles Britanniques (sauf deux districts dans l'ouest de l'Irlande où la taille est petite), de la Suède, de la Norvège (sauf trois petits districts de taille moyenne au centre du pays), du nord de la Hollande, du Sleswig Holstein ; puis la population de la moitié sud-ouest de la Finlande, de la côte ouest du Danemark et de la côte des provinces Baltiques en Russie, sont de grande taille. Dans le sud-est du Continent il y a aussi de vastes régions à population de haute taille : la Dalmatie, la Bosnie-Herzégovine, la Serbie, l'Albanie, la Macédoine et toute la moitié est du Caucase.

Le reste de l'Europe, à l'exception de quelques îlots (quatre ou cinq arrondissements dans l'est de la France, l'Alsace-Lorraine, la Franconie bavaroise, le sud de la Bavière, le nord-est du Tyrol, la Basse Autriche, la Vénétie, l'Istrie et trois districts dans l'ouest de la Russie) est occupé par les populations de moyenne ou de petite taille.

Les tailles moyennes se groupent surtout au voisinage des grandes tailles : dans le nord-est de la France, en Suisse romande, en Belgique, dans le sud de la Hollande, appuyées sur les hautes statures des Alsaciens-Lorrains d'une part, des Hollandais du nord de l'autre ; puis au Danemark et probablement en Prusse, sauf peut-être les provinces de l'est, la Silésie et les pays des Vendes, où les petites tailles doivent dominer à en juger par les pays environnants (Pologne russe, Saxe, Silésie autrichienne, nord-est de la Bohême). La taille moyenne domine aussi en Allemagne du sud (sauf le Schwarzwald et le centre de la Bavière, occupés par les petites tailles), parmi les Ladins ou Romanches en Suisse et en Tyrol, enfin dans les Alpes Italiennes, le centre de la Bohême, la Haute-Autriche, la Carinthie, la

¹ On en trouvera les principaux, sans correction, dans mon volume déjà cité, *The Races of Man*. Il faudrait y ajouter la moyenne de 44950 Suédois d'après Retzius (1709 mm.), de plusieurs milliers de Finlandais occidentaux (1695 mm.), de Tavastes (1688 mm.), de Karéliens (1664), et de Kvenes (1654 mm.), d'après Westerlund ; des 1444 Portugais (1645 mm.), d'après S. A. Marques ; enfin des 5024 Bulgares (1665 mm.), et des 200 Macédoniens (1686 mm.) d'après Wateff.

Styrie, la Slavonie-Croatie. On voit aussi d'après la carte que les populations de taille moyenne relient la région des hautes tailles du nord (Hollande, Sleswig-Holstein) à celle du sud, qui, comme on a déjà vu plus haut, est constituée par la partie N.-O. de la presqu'île Balkanique. Le reste de cette presqu'île est occupé par les populations de taille moyenne avec des îlots des grandes tailles. En Roumanie les tailles moyennes font place aux petites seulement dans le Sud-est de la Valachie et dans la Moldavie.

Le contraste est assez frappant entre la presqu'île Balkannique, "pays à hautes et très hautes statures," et l'Italie, péninsulaire ou bien la presqu'île Ibérique où dominent les petites et les très petites tailles.

Toutefois une zone de taille moyenne (avec quelques îlots de grandes tailles) se fait remarquer sur tout le pourtour de la Méditerranée, depuis la province de Lucques en Italie jusqu'à celle de Valence en Espagne; elle reparait, mais plus fragmentaire, sur les côtes Océaniques de l'Espagne, du Portugal et de la France ou dans leur voisinage. Elle occupe l'emplacement de ma race "Atlanto-Méditerranéenne." Enfin les "tailles moyennes" sont bien représentées dans la région Baltique de la Russie où leur zone prolonge celle du N.E. de la Finlande, ainsi que dans le sud de ce pays où elles sont en connection avec la région montagneuse de la Galicie orientale (habitée par les Ruthènes) ainsi qu'avec "les tailles moyennes" du Caucase occidental et des populations turques du sud-est de la Russie.

Au point de vue de la taille, le bombement central du territoire russe, que nous avons signalé plus haut, à propos des indices céphaliques, ne constitue point une ligne de partage. A l'ouest, au nord et à l'est de ce bombement comme sur le plateau même qui le couronne on ne rencontre dans toute la Russie que des populations de petite taille analogues à celles de la Pologne et de la Moravie et probablement de la Silésie.

Cette vaste région de "petites tailles" communique par d'étroits goulots avec d'autres zones, occupées par les "petites tailles": la Moldavie, La Hongrie, le nord de la Styrie et le centre de la Bavière.

Ces "petits" que je qualifierai d'*orientaux*, sont séparés par un vaste et important massif de grandes et moyennes statures, des autres populations de petite taille qui occupent la moitié sud-ouest de la France, la haute vallée du Pô en Italie et le centre de la Suisse, tout en projetant quelques îlots dans le nord-est de la France, en Belgique et dans le Schwarzwald. Je qualifierai ces populations de *petits occidentaux* pour les distinguer des *petits méridionaux*, dont ils sont séparés à leur tour par les populations de haute stature occupant les Pyrénées et le nord des Apennins. La zone de ces "petits méridionaux" au milieu de laquelle on rencontre de nombreux îlots de taille très petite (au dessous de 1625 mm. ou 5 pieds 4 pouces) couvre toute la presqu'île Ibérique sauf la région littorale indiquée plus haut et occupée par les tailles "moyennes," ainsi que toute l'Italie méridionale (au sud de la ligne Rome-Ancone) et les îles de la Méditerranée: Sicile, Sardaigne (taille la plus basse de toute l'Europe) et la Corse, mais pas les Baléares dont a population se rattache ainsi aux Catalans non seulement au point de vue

linguistique, mais encore au point de vue des caractères physiques (taille, indice céphalique et pigmentation). Les limites de ces "petits méridionaux" sur la carte sont presque celles de ma race *Ibéro-Insulaire*.

Pour la pigmentation je serai encore plus bref que pour la taille.

La raison en est qu'il serait trop long d'expliquer comment je combine les données fournies par différents auteurs sur la couleur des yeux et des cheveux.

Il suffira de dire que je prends pour base la *répartition du type brun* en Europe comme étant la moins discutable. Ce faisant, j'ai soin d'apporter certaines corrections quand j'utilise les matériaux fournis par des observations sur les enfants : en général j'augmente de 10 à 20 pour cent, suivant les pays (soit en moyenne de 15 pour cent) le nombre des bruns dans ce cas. Cette correction est le résultat des nombreuses comparaisons faites entre les observations sur les enfants et sur les adultes dans les mêmes régions. D'ailleurs, c'est au même chiffre de 15 pour cent que c'est arrêté Virchow dans son enquête sur la population scolaire de l'Allemagne.

La carte que j'ai ainsi obtenue, et que est reproduite à la suite de ce mémoire, ne représente que la base de la répartition des bruns et des blonds en Europe. En établissant mes "races," j'ai tenu compte aussi des résultats pour la répartition des cheveux blonds, des yeux foncés ou bruns (carte la plus sûre), des yeux clairs, etc., d'après les reports faits sur des cartes spéciales.

Pour établir ces cartes de *la couleur des yeux et des cheveux*, je me suis servi, outre les travaux de la plupart des auteurs cités plus haut, des documents publiés par H. Sainz et Aranzadi pour l'Espagne ; par Topinard pour la France ; par Vanderkindere pour la Belgique ; par la commission scolaire (rapporteur R. Virchow) pour l'Allemagne ; par Studer, Froelich, et Kollmann pour la Suisse ; par Schimmer pour l'Autriche ; par Soren-Hansen pour le Danemark ; par Emme, Grube, Ikof, Valdhauer, Waber, Yantchouk, Zograf, Ivanovsky pour la Russie ; par Ornstein pour la Grèce ; par L. Bolk pour la Hollande ; par Janko pour la Hongrie, etc.¹

J'ai eu également à ma disposition certains documents inédits concernant ce caractère ; les plus importants m'ont été fournis par le Dr. Topinard pour la France et par le Dr. Ferraz de Macedo pour le Portugal.

La carte ci-jointe de la répartition du type brun, parle pour ainsi dire d'elle-même. J'appellerai les trois zones qu'elle met en évidence : la zone des *châtains* ou intermédiaires (de 17 à 30 pour cent du "type brun," c'est-à-dire des individus aux cheveux bruns et aux yeux foncés) ; la zone des *blonds* (moins de 17 pour cent du type brun) ; et la zone des *bruns* (plus de 30 pour cent du type brun).

¹ Pour la bibliographie de ces ouvrages, voy. ce qui a été dit plus haut. Il ne me reste qu'à ajouter les indications suivantes : L. Bolk : "De Verspreiding van het blondine en brunette type in ons land" (Distribution des types blond et brun dans notre pays), *Verslag K. Akademie v. Vetenschappen*, Amsterdam (Séance du 23 Avril, 1904), av. carte ; et Froelich : "Le recrutement dans la Suisse italienne," *Revue médicale de la Suisse romande*, 13e année, Genève, 1893, p. 194, 248 et 293.

Les limites extrêmes sont 3 pour cent (Suède) et 70 pour cent (Italie méridionale).

Ces zones se succèdent du nord (blonds) au sud (bruns), mais leurs limites forment des lignes très sinueuses et qui parfois font toucher la zone brune par la zone blonde (par exemple près de Liège, sur les rives du Dnieper près de Kiev et aux environs de Perm). La frontière des blonds au nord ne dépasse guère le 50^e parallèle en Allemagne et dans l'ouest de la Pologne Russe. Mais cette ligne se relève à l'ouest de l'Allemagne, glissant le long de la frontière, entre la Belgique et la Hollande et passant par Utrecht et Rotterdam dans les Iles Britanniques, où elle sépare le sud-ouest de l'Angleterre et le pays de Galles du reste du Royaume-Uni. Dans l'ouest de la Pologne russe, la ligne limite des blonds fait un crochet au nord vers l'endroit où la Vistule entre en Prusse, se rejette ensuite au S.E., jusqu'à la rive gauche du Dneiper en aval de la ville de Tcherkassy, remonte le courant de ce fleuve, puis celui de la Desna jusqu'à ses sources pour se diriger au nord vers les sources du Volga, et ensuite à l'est, passant près des villes : Vesyogonsk, Vologda, Kostroma. A la hauteur de la ville de Kologriv, la ligne dessine un golfe et se dirige au sud-ouest jusqu'à Vladimir, pour revenir de nouveau à l'est vers la ville de Viatka et y décrire ensuite un golfe à l'est en contournant les villes de Perm, Solikamsk, et Tcherdyn ; elle remonte enfin au N., vers Mésén.

La limite extrême des "bruns" vers le nord offre une ligne bien plus mouvementée. Elle commence au pied du Cotentin à Avranches, décrit une courbe qui passe par Orléans, Paris, St. Quentin, Mons, Bruxelles, puis descend vers Liège ; tombe à Metz, Nancy, Strasbourg, Bâle, Berne et suit la frontière franco-italienne jusqu'au voisinage de la Méditerranée. Là elle affleure les côtes des Alpes Liguriennes, puis contourne la région des lacs de la Haute-Italie et se redresse vers le nord, passant par Uri et Zurich jusqu'au lac de Constance, d'où elle oblique au sud-est, vers Bregenz et Botzen pour arriver à l'Adriatique, côtoyant la frontière ouest de la Vénétie. Plongeant pour ainsi dire sous la mer, la ligne limite réapparaît en Istrie, où elle suit la frontière nord de la Croatie et passe en Carinthie près de Cilli jusqu'au confins de la Hongrie. Sa direction ultérieure vers l'orient n'est que problématique en grande partie. Elle doit frôler la rive sud du lac Balaton, et se porter en Hongrie vers l'est jusqu'en Bukovine qu'elle sépare, comme on le sait par les travaux de la Commission scolaire autrichienne, de la Galicie ; puis descendre le Dniester, se porter vers le Dnieper, remonter ce fleuve sur sa rive gauche aux environs de Kiev, passer ensuite au voisinage de Kharkov, Poltava, Ekaterinoslav, et se diriger finalement à l'est vers les campements des Kalmouks d'Astrakhan. De là la ligne-limite se porte au Caucase, puis sautant la Caspienne, passe au nord de l'habitat des Khirgiz, des Bachkirs, des Tartars et des Finnois à l'est du Volga, pour se rapprocher enfin, près de Perm, de la ligne frontière des blonds en Russie. Les pays compris entre les deux lignes que je viens de décrire, sont occupés par les populations à type mixte ou châtain (cheveux châains, yeux clairs ou foncés). Il est bien entendu que dans cette zone mixte, on

rencontre des îlots de populations blondes et surtout "brunes," de même que dans chacune des deux zones précédentes on trouve des îlots intermédiaires. Voici quelques indications à ce sujet :—

- 1°. Les îlots de blonds dans la zone des "châtains" sont assez rares ; on les remarque au sud de l'Angleterre (la région composée de Berkshire, d'Oxfordshire, de Hampshire, de Sussex et de Middlesex, ainsi que le comté de Somerset) puis près de Lemberg en Galicie et enfin dans le sud de la Russie (région qui comprend tout ou partie des provinces de Kharkov, de Koursk, de Voronèje, de Tambov, de Saratov, d'Astrakhan et peut-être le nord du pays des Cosaques du Don).¹

Le bombement central de la Russie déjà mentionné plus haut, est entouré ainsi au nord, au sud et à l'ouest par des populations "blondes" ; à l'est se trouve la région mixte où les Tatares et les Finnois bruns sont intercalés entre les Russes et les Finnois châtains. Pour le bombement même, aucune indication. Seul le district de Toula s'y trouve marqué comme appartenant aux "blonds."

- 2°. Quant aux îlots des "bruns" dans la zone des "châtains," ils sont assez nombreux, mais tous très petits. Les principaux sont : Salzbourg, Carinthie, district de Lemberg, le nord-ouest de la Bohême en Autriche ; les territoires occupés par les populations de race turque dans l'est de la Russie, etc.
- 3°. Les îlots des "châtains" dans la zone des "blonds" se rencontrent, pour ainsi dire, exclusivement dans les Îles Britanniques, notamment en Écosse (Lanarkshire) et en Irlande (Clare, Tipperary, Meath et l'île de Man).
- 4°. Par contre, les régions occupées par les châtains dans la zone des bruns sont assez nombreuses en Europe occidentale. Ce sont : tout l'est de la France depuis Mezières jusqu'à Lyon ; puis un point en Italie (près de Spezzia) ; plusieurs points de la Dalmatie du nord ; mais on n'en trouve guère en Russie où d'ailleurs la zone des bruns est encore très incertaine.

Me voilà au terme du résumé de ce que l'on sait sur l'indice céphalique, la taille et la pigmentation des populations européennes. En y ajoutant d'autres données sur la forme de la face, la configuration du nez, la nature des cheveux, etc., j'arrive à caractériser mieux que jadis les six races de l'Europe et à mieux les localiser.

Je donne très brièvement cette caractéristique et cette localisation. En la comparant avec ce que j'ai dit en 1897-98, on verra les modifications que j'ai du apporter et qui en somme sont moins importantes que je ne l'attendais.

1°. *Race blonde dolichocéphale, de très grande taille*, que l'on peut appeler *race nordique*, parce que ses représentants sont groupés presque exclusivement dans

¹ En dehors de cette région il faut signaler en Russie un flot de blonds au milieu de "châtains" le long de la vallée du Kama.

le nord de l'Europe. Caractères principaux : taille très élevée (1 m. 73 en moyenne), cheveux blonds souples, souvent roussâtres, ondulés ; yeux clairs, pour la plupart bleus ; tête allongée, dolichocéphale (ind. céph. sur le viv. de 76 à 79) ; peau d'un blanc rosé ; face allongée, nez proéminent, droit. Le type pur ou légèrement modifié de cette race est répandu en Suède, Danemark, Norvège (sauf le littoral sud et ouest) ; dans le nord de l'Écosse ; sur la côte est et dans le nord de l'Angleterre ; probablement dans le nord-est de l'Irlande ; dans les îles septentrionales de Far-Oer ; en Hollande (au nord du Rhin) ; dans les pays Frisons ; dans l'Oldenbourg, le Sleswig-Holstein, le Mecklembourg et probablement dans les pays avoisinant en Prusse ; enfin sur les côtes des provinces Baltiques de la Russie et parmi la population parlant suédois de la côte de Finlande. C'est la race kymrique de Broca, la race germanique ou des Reihengräber des auteurs allemands, la race "teutonique" de Ripley, ou enfin l'*Homo Europæus* de Lapouge-Ammon.

A cette race se rattache une *race secondaire, blonde ou châtain, mésocéphale, de grande taille ou de taille moyenne (sub-nordique)*, à face anguleuse, à nez retroussé et aux cheveux droits assez raides et d'un blond filasse ou cendré ; elle est répandue surtout dans l'Allemagne du Nord, parmi les Letto-Lithuaniens, parmi les Tavastes et les Savolaks en Finlande ; peut-être aussi sur la côte ouest de Norvège et en Danemark ; sur la côte ouest de l'Écosse, dans le sud des Far-Oer (restes des populations de l'âge du bronze dans cette région ?)

2°. *Race blonde, sous-brachycéphale, de petite taille, ou race orientale*, ainsi nommée parce que ses représentants sont surtout nombreux dans l'est de l'Europe. Caractères principaux : taille peu élevée (1 m. 63 ou 1 m. 64 en moyenne) ; tête assez arrondie (ind. céph. 82 à 83 sur le viv.) ; cheveux blonds cendrés ou filasse, droits ; face large, carrée ; nez souvent retroussé ; yeux bleus ou gris. Les représentants de ce type sont les Bielorusses, les Poliechtchouki des marais de Pinsk. A l'état de mélange avec les types tatar ou finnois cette race est fréquente parmi les Vélikorusses ou Grands-Russiens du nord de la Russie. On la rencontre également par places dans la Russie méridionale ainsi que parmi les Kareliens de la Finlande.

A cette race il faudrait rattacher une *race secondaire, blonde ou châtain, mésocéphale, de très petite taille (race vistulienne)*, dont les caractères se rencontrent fréquemment parmi les Polonais, les Kachoubes de la Prusse, ainsi que probablement en Saxe et en Silésie.

A l'état de mélange on la retrouve parmi les Lithuaniens, et dans certaines populations russes du nord (Vologda, Olonetz), du sud (Koursk, Voroneje) et du centre (Riazan, ouest de la province de Yaroslav). Il est bien possible que cette variété doit se confondre avec la race orientale et même lui donner son nom.

3°. *Race brune, dolichocéphale, de petite taille, appelée ibéro-insulaire*, parce qu'elle est répandue pour ainsi dire sans partage dans la presqu'île Ibérique (sauf certaines côtes) et dans les îles de la Méditerranée occidentale (Corse, Sardaigne, etc.). On la rencontre cependant, presque pure ou légèrement atténuée, en France

(dans l'Angoumois, le Limousin et le Périgord), en Italie méridionale (au sud de la ligne Rome-Ascoli, mélangée jusqu'à la hauteur de Naples, presque pure plus au sud). Caractères principaux : taille très petite (1 m. 61 à 1 m. 62 en moyenne) : tête très allongée (ind. céph. moy. : 73 à 76 sur le viv.) : cheveux noirs parfois bouclés ; yeux très foncés, peau basanée ; nez droit ou retroussé, etc. C'est la "race méditerranéenne," ou *Homo mediterraneus*, ou encore les "dolichocéphales bruns" de certains auteurs.

4°. *Race brune, très brachycéphale, de petite taille*, dénommée *race cévenole* ou *occidentale* à cause de la localisation de son type le mieux caractérisé dans l'extrême ouest de l'Europe continentale, dans les Cévennes, sur le plateau central et aussi dans les Alpes occidentales. Mais on la rencontre, atténuée, il est vrai, par des mélanges, dans l'intérieur de la Bretagne (sauf le Morbihan), dans le Poitou, le Quercy ; elle reparait assez pure en Provence, puis en Italie dans la haute vallée du Pô, en Ombrie, dans une partie de la Toscane, en Transylvanie et probablement au centre de la Hongrie. Mélangée avec d'autres races, elle se retrouve sur une foule de points de l'Europe, depuis le bassin de la Loire moyenne, jusqu'au sud-ouest de la Russie, passant par le Piémont, probablement par la Suisse centrale, puis par le Schwarzwald, le centre de la Bavière, la Carinthie, la Moravie, la Galicie, jusqu'à la Podolie. En Italie méridionale elle se mélange avec la race ibéro-insulaire. C'est la race celtique, celto-ligure, celto-slave, sarmate, rhétienne, ligure, ou *Homo alpinus* des différents auteurs. Elle est caractérisée par le crâne très arrondi (ind. céph. moy. sur le viv. : 85-87), par la petitesse de la taille (1m. 63-1m. 64) ; par les cheveux bruns ou noirs et les yeux d'un brun clair ou foncé ; par la face arrondie, le corps trapu, le nez assez large.

5°. *Race brune, sous-dolichocéphale, de grande taille, race Littorale ou Atlanto-méditerranéenne*, ainsi nommée parce qu'elle est répandue sur le pourtour de la Méditerranée, depuis Gibraltar jusqu'à l'embouchure du Tibre ainsi que dans la partie est de la presqu'île Balkannique (est de la Bulgarie, Macédoine, Grèce, etc.) et sur plusieurs points du littoral atlantique : en Espagne, de Gibraltar à l'embouchure du Guadalquivir ; sur la côte dans le nord du Portugal et sur le golfe de Gascogne ; dans la basse vallée de la Loire, etc. On ne la rencontre plus ou moins pure nulle part à plus de 200 ou 250 kilomètres de la mer. Elle se distingue par sa tendance vers la mésocéphalie (ind. céph. moy. 79 à 80 chez le vivant), par la taille moyenne qui dépasse rarement 1 m. 66 ou 1 m. 67, et par la coloration très foncée des yeux et des cheveux.

6°. *Race brune, brachycéphale, de grande taille, appelée Adriatique ou Dinarique*, parce que ses représentants les plus purs se rencontrent sur le pourtour de l'Adriatique du Nord et surtout en Bosnie, Dalmatie, Croatie et presque dans toute la partie centrale de la presqu'île Balkanique. On la rencontre aussi, un peu modifiée il est vrai, dans la Romagne et la Vénétie, parmi les Ladins du Tyrol, parmi les Roumanches de la Suisse, ainsi que dans la région franco-belge qui s'étend du S. au N., depuis Lyon jusqu'à Liège entre la Loire et la Saône d'abord, puis sur le plateau de Langres, dans les hautes vallées de la Saône et de la Moselle

ainsi que dans les Ardennes et peut-être dans la province de Zélande (Pays Bas). Caractères essentiels : taille élevée (1 m. 68 à 1 m. 72 en moyenne), extrême brachycéphalie (81–86 indice céphalique), cheveux bruns, nez fin, droit ou convexe, teint légèrement basané. Les mêmes caractères un peu atténués se rencontrent chez les populations de la basse vallée du Po, du nord-ouest de la Bohême, probablement dans la Suisse Romande, en Alsace Lorraine, en France à l'est du cours moyen de la Loire (entre Roanne et Orléans) ; enfin dans la basse Autriche, en Moravie, parmi les montagnards Ruthènes des Carpathes et les Ukrainiens de la province de Poltava.

A ces deux dernières races il faut ajouter deux races secondaires qui sont peut-être simplement des "types" issus du mélange de ces deux races entre elles, ou avec les races Nordique, Sub-nordique et Occidentale.

Race secondaire, Nord-Occidentale, dolichocéphale ou mésocéphale, aux cheveux châtain, parfois presque bruns. C'est une race intermédiaire entre la Nordique et l'Atlanto-Méditerranéenne. On la rencontre principalement dans l'ouest de l'Irlande, dans le sud-ouest de l'Angleterre, dans tout le pays de Galles, dans l'ouest de la Belgique, dans le sud de la Hollande et plus rarement en Picardie et en Normandie.

Race secondaire, sub-Adriatique, sous-brachycéphale plus rarement brachycéphale, de taille moyenne, aux cheveux châtain. La taille dans cette race se maintient aux environs de 1 m. 66 et l'indice céphalique varie de 82 à 84. Elle est issue probablement du mélange de la race Adriatique avec la race sub-Nordique et Occidentale.

Elle est répandue dans les pays suivantes : dans le Perche, la Champagne, la Franche-Comté, le Luxembourg, la province de Zélande (Hollande), les provinces Rhénanes, le nord du grand duché de Bade, l'est de la Bavière, le sud-est de la Bohême. On la trouve aussi parmi les Slovènes et dans une partie de la Lombardie et de la Vénétie. Elle est mélangée avec la race occidentale en Suisse, et dans l'Allemagne du Sud ; avec la race Nordique en Allemagne centrale et peut-être dans le Luxembourg hollandais.

Tels sont les résultats généraux de mes recherches, mis à jour d'après les travaux les plus récents. Il me semble qu'ils justifient pleinement la reconnaissance de la légitimité de mes six races européennes.

Tout anthropologiste impartial qui lira attentivement mon exposé et examinera mes cartes sera amené, je l'espère, à ajouter aux trois races européennes classiques : Nordique (*Homo Europeus*), Occidentale (*Homo Alpinus*), et Ibéro-insulaire (*Homo Mediterraneus*), encore trois autres : Orientale, Atlanto-Méditerranéenne, et Adriatique que l'on pourrait aussi appeler respectivement : *Homo Vistulensis*, *Homo Atlanto-Mediterraneus*, et *Homo Adriaticus*.

NOTE SUPPLÉMENTAIRE.

Depuis que ma conférence a été imprimée j'ai reçu quelques nouvelles publications qui complètent les renseignements sur lesquels je m'appuie dans mes conclusions.

L'une de ces publications est la suite des études patientes que M. Arbö poursuit en Norvège depuis près de 20 ans.¹ Elle se rapporte à la province de Bratsberg, qui forme l'arrière-pays de la partie sud-ouest de la côte norvégienne à populations plus ou moins brachycéphales. Comme on pourrait s'y attendre, les Norvégiens de la partie orientale de cette province appartiennent à la race Nordique pure, tandis que ceux de la partie occidentale, plus proche de la zone méso- et sous-brachycéphale, offrent un type mélangé (tête plus arrondie, face et nez plus larges, mais taille plus haute et pigmentation plus claire²) se rapprochant de celui de la race sub-nordique comme le prouvent d'ailleurs les excellentes photogravures jointes au mémoire. Certains de ces types rappellent les habitants du nord-ouest de la Russie, où domine, comme on le sait, la race Orientale. La présence de cette dernière race nous est révélée aussi d'une manière très précise en Finlande par un nouveau travail de Westerlund³ qui a étudié, sur plus de 5,000 sujets, la pigmentation d'après la méthode suivie par G. Retzius et Fürst en Suède. Il résulte de ce travail que les Suédois de la Finlande sont légèrement moins blonds que ceux du royaume et ont presque la même pigmentation que les Finnois occidentaux (Suomi) qui forment le gros de la population de la Finlande. D'autre part, ces derniers, dans les districts limitrophes de la Suède sont plus blonds que les Suédois du Nord. On ne peut donc pas expliquer, comme le supposaient Retzius et Fürst, par le mélange avec les Finnois la fréquence relative du type châtain parmi les habitants du nord de la Suède. Il faudrait plutôt incriminer ici l'infusion de sang lapon, comme il faut chercher dans le mélange avec les Finnois orientaux (ou Finno-Ougriens) l'explication de la fréquence relative du même type châtain parmi les Karéliens de la Finlande orientale. Notons enfin que les yeux gris et les cheveux blond-cendrés sont plus fréquents parmi les Finnois occidentaux que parmi les Suédois, par contre, chez ces derniers, les yeux bleus et les cheveux blond-dorés sont un peu plus fréquents que chez les Finnois occidentaux.

En nous transportant à l'autre bout de l'Europe, en Roumanie, nous pouvons constater, grâce aux travaux d'E. Pittard,⁴ les faits suivants, se rapportant à l'indice céphalique et à la pigmentation. Les Roumaines du royaume, tous très bruns, semblent être moins brachycéphale que ceux de la Transylvanie et de la Bukovine. Leur indice céphalique moyen est de 82, 9. Les montagnards sont plus brachycéphales (84, 4) que les habitants de la plaine (83). D'après les séries de crânes, les Roumains de la Dobrodja se rapprochent de ces derniers (82, 6, indice

¹ Arbö, "Fortsatte Bidrag til Norges anthropologi." VI. Bratsberg Amt. *Videnskabs-Selskabets Skrifter*. I. Math-naturv. kl., 1904; No. 5. Christiania; av. fig. et carte.

² Il est intéressant à noter que, contrairement à ce qui a été trouvé par Collignon pour le sud-ouest de la France, la largeur de la face et du nez ne sont pas ici fonctions de la taille; mais cela ne paraît être vrai que pour les mésocéphales; les sous-brachycéphales blonds sont plus petits et appartiennent probablement à la race orientale.

³ F. W. Westerlund, "Studier i Finlands Anthropologi. IV. Ögon-och harfärg." *Fennia*, t. 21, No. 5. Helsingfors, 1904.

⁴ E. Pittard, "Anthropologie de la Roumanie," *Bul. Soc. des Sciences de Bucarest—Roumanie*, an 12, 1903, no. 1 et 2, av. fig. (Résumé dans *l'Anthropologie*, t. 14, 1903, p. 33). Du même: 30 crânes roumains provenant de la Moldavie; *ibid.*, no. 3-4, p. 223.

augmenté de 2 unités), tandis que les Roumains de la Moldavie ont l'indice des montagnards (84, 4).

Transportée sur la carte, cette indication fait ressortir de la façon la plus évidente un fait important qu'on peut formuler ainsi : la zone de distribution des brachycéphales en Europe centrale coïncide avec la région montagneuse, du Plateau Central aux Karpates ; tandis que dans les péninsules du sud, c'est la montagne qui est occupée par les dolichocéphales, les formes plus arrondies de la tête étant confinées dans la plaine. Cette répartition est très visible dans la péninsule Ibérique ; elle est moins nette en Italie et dans l'ouest de la presqu'île Balkannique.








CARTE

de la taille moyenne des hommes

EN EUROPE.

dressée par J. Deniker

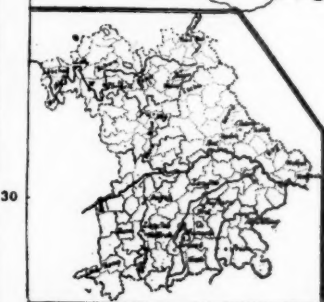
0 100 Kil

-  = 1725 mm. et au delà.
-  = 1700-1724 mm.
-  = 1675-1699 mm.
-  = 1650-1674 mm.
-  = 1625-1649 mm.
-  = 1600-1624 mm.
-  1599 et au dessous.

50

40

30



J. Deniker, 1887

0

10



CARTE

de la distribution du type "brun"

EN EUROPE.

dressée par J. Deniker.

0 100 Kil.

plus de 30 %.

moins de 17 %.

17 à 30 %.

— Limite reconnue
ou présumée des
Blonds au S.

- - - Limite reconnue
ou présumée des
Bruns au N.

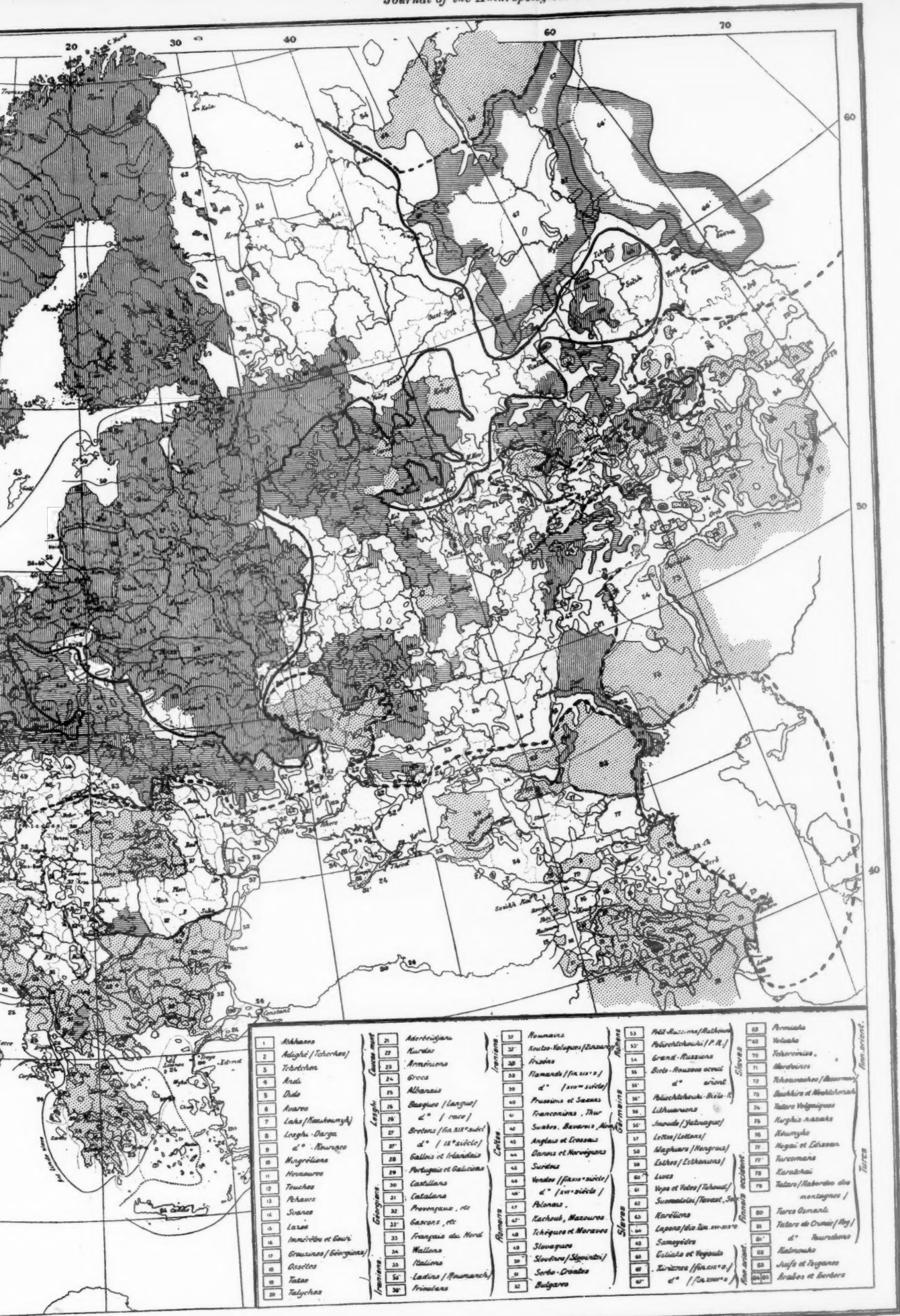
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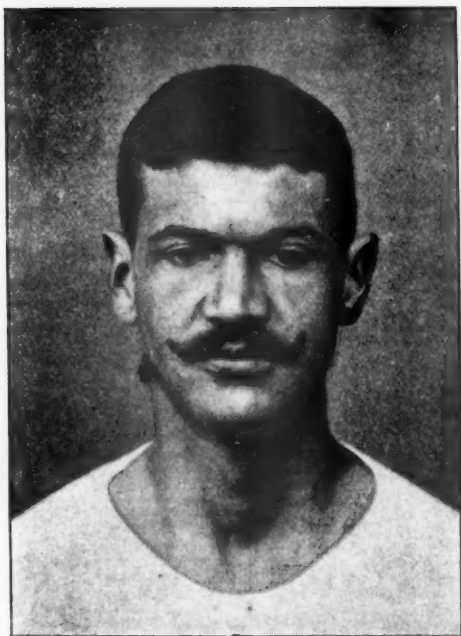
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A. Gaudin, 1892.

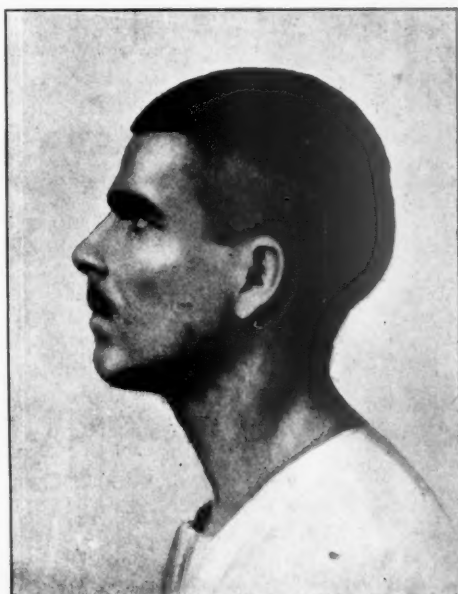
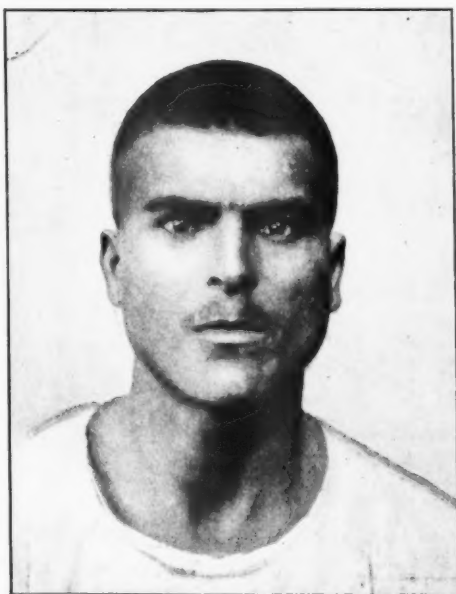
10





PORTUGAIS.

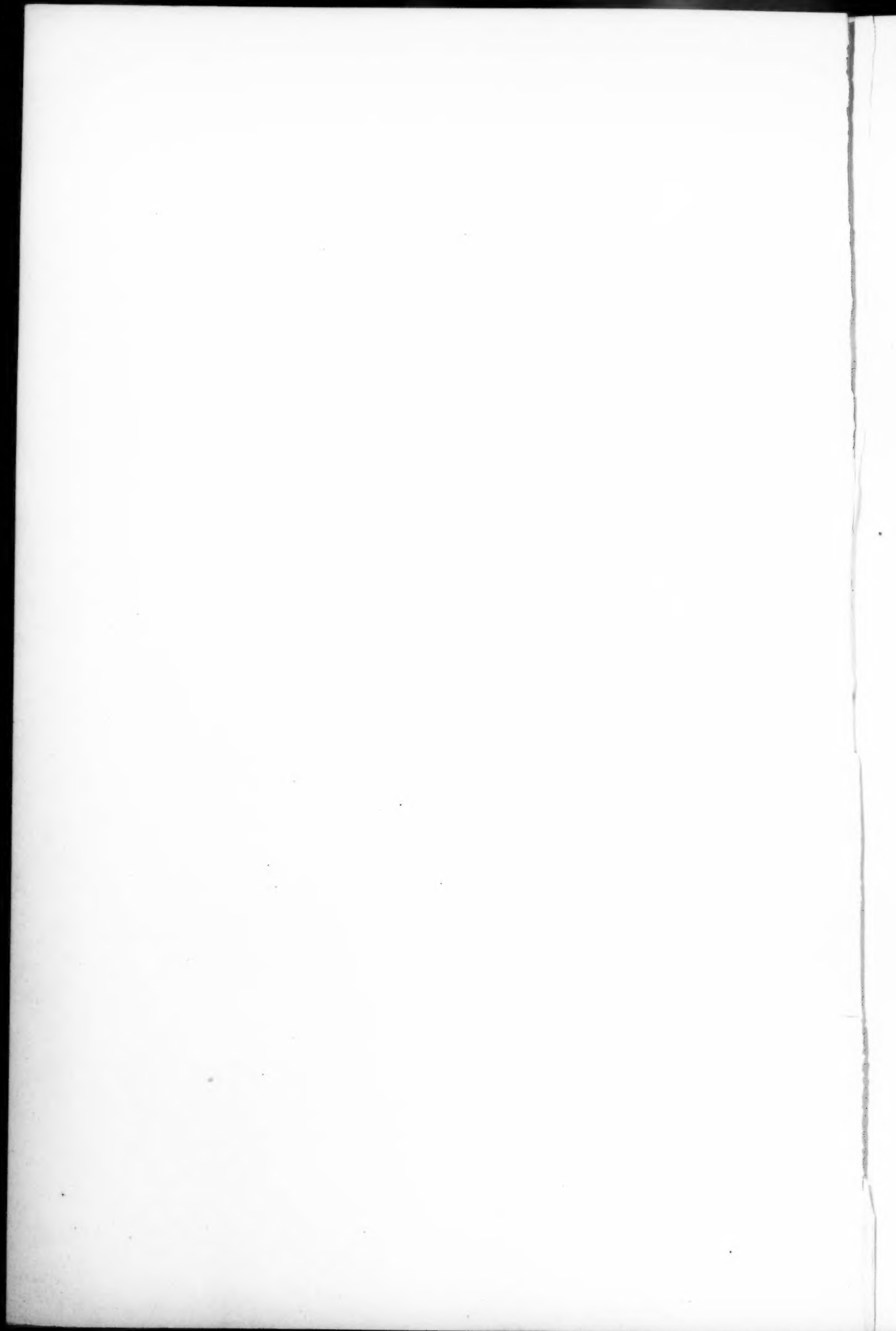
TYPE MIXTE. (MÉLANGE DES RACES IBÉRO-INSULAIRE ET OCCIDENTALE.)

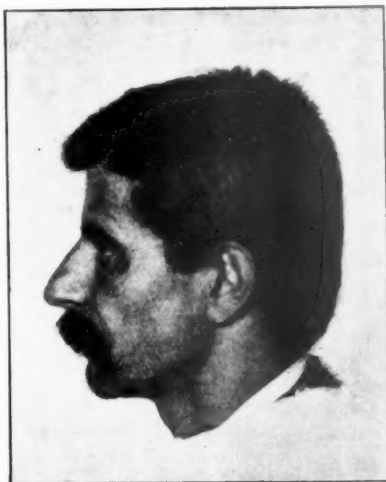
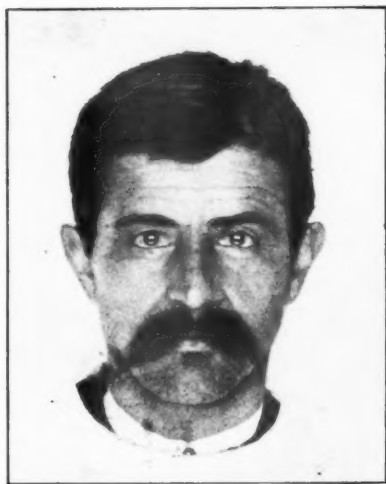


PORTUGAIS.

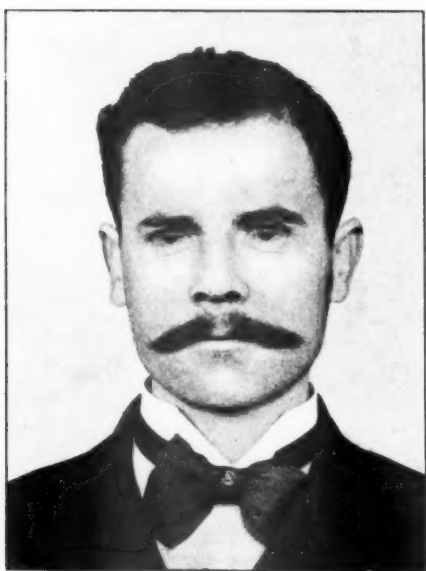
TYPE COURANT. (MÉLANGE DES RACES IBÉRO-INSULAIRE ET ATLANTO-MÉDITERRANÉENNE.)

LES SIX RACES COMPOSANT LA POPULATION ACTUELLE DE L'EUROPE.



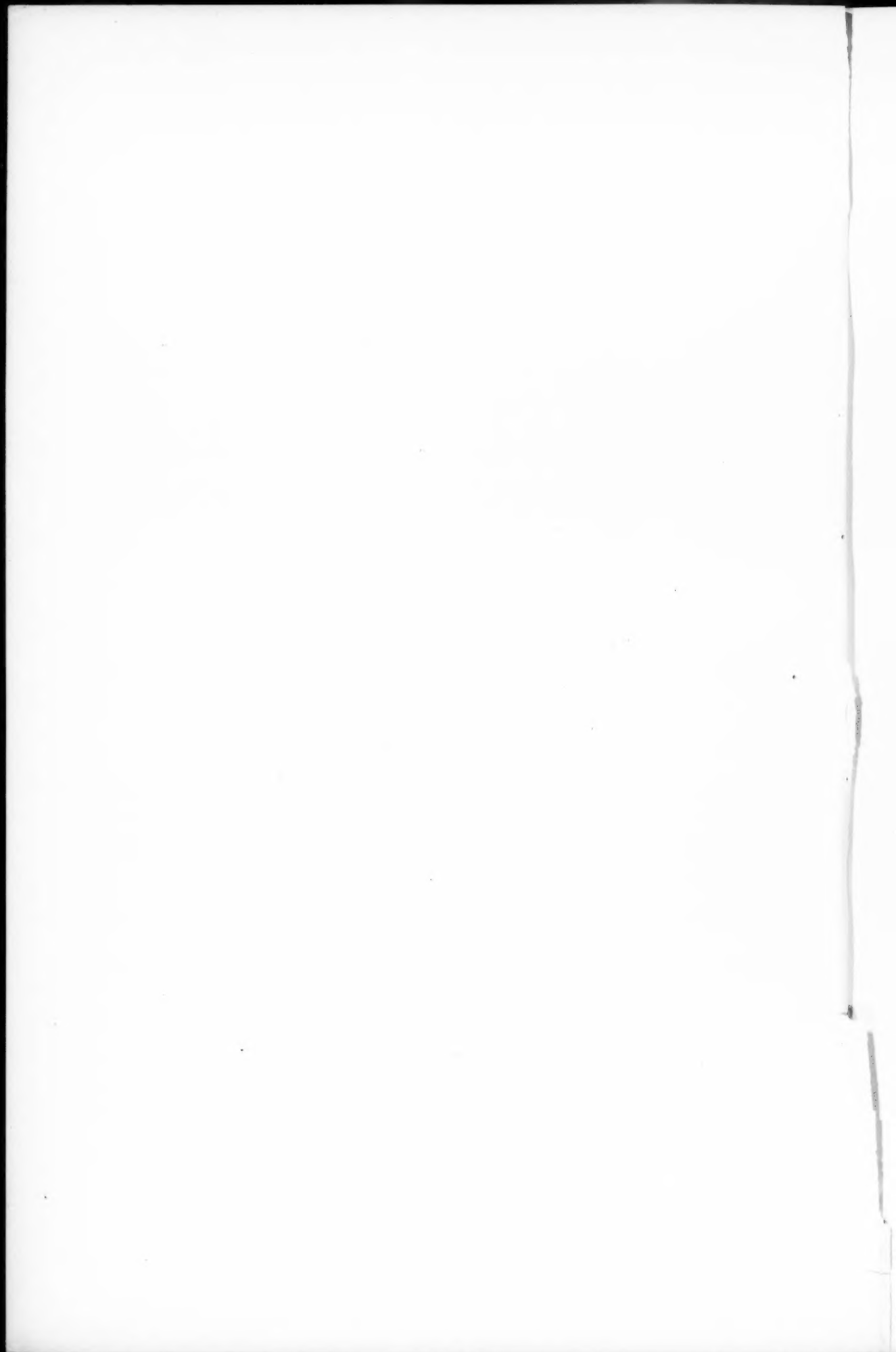


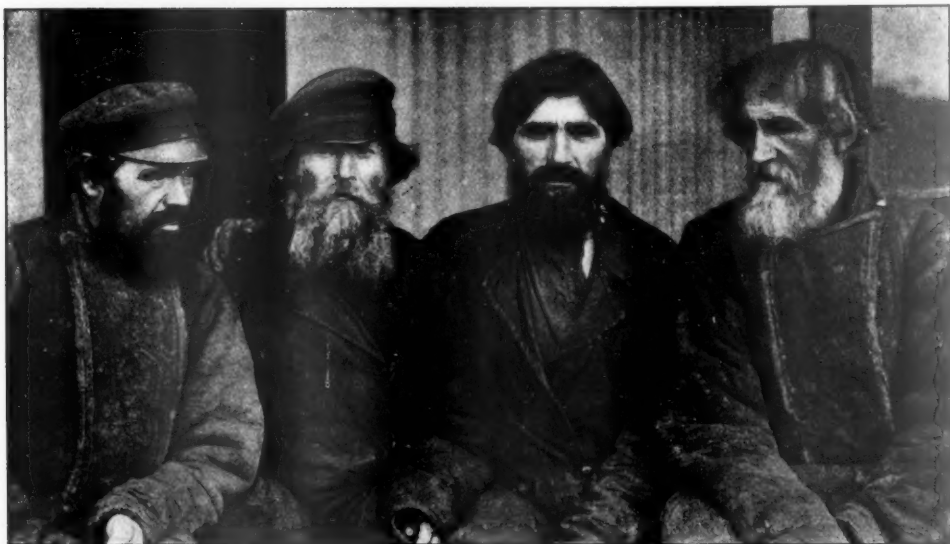
BULGARE DU SUD-OUEST.
TYPE MIXTE. (RACES ADRIATIQUE ET ATLANTO-MÉDITERRANÉENNE.)



BULGARE DU SUD.
TYPE COURANT. (RACES ATLANTO-MÉDITERRANÉENNE ET ADRIATIQUE.)

LES SIX RACES COMPOSANT LA POPULATION ACTUELLE DE L'EUROPE.





RUSSES. (RACES ORIENTALE ET FINNO-UGRIENNE.)



RUSSE. (RACES ORIENTALE ET FINNO-UGRIENNE.)

LES SIX RACES COMPOSANT LA POPULATION ACTUELLE DE L'EUROPE.



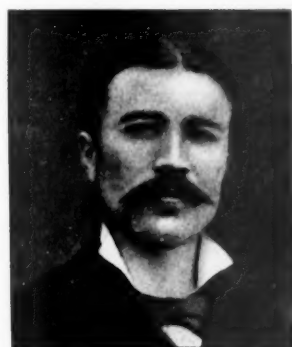
ITALIENNE.
RACE SUB-ADRIATIQUE.



MACÉDONIENS. RACE ADRIATIQUE.



MONTÉNEGRIENNE.
RACE ADRIATIQUE.



FRANÇAISE ET FRANÇAIS DU MIDI. RACE OCCIDENTALE.



BULGARE. RACE VISTULIENNE OU ORIENTALE MÉLANGÉE DE SANG TURC.
LES SIX RACES COMPOSANT LA POPULATION ACTUELLE DE L'EUROPE.

A SEA-DYAK LOVE PHILTRE.

BY REV. W. HOWELL AND R. SHELFORD, M.A.

THE objects with which this paper deals constitute a *jayan* or love philtre recently obtained by one of us from a Sea-Dyak woman, who, having reason to suppose that her husband had ceased to care for her, had had the charms made with the intention of winning back his love. The philtre consists of coconut oil contained in two European medicine-bottles and a small Chinese pot; all are stoppered with cloth plugs, and in the stopper of the little pot is stuck a needle; all three bottles are kept in a basket of plaited *bemban* (*Donax sp.* = *Clinogyne sp.* - Marantaceae) with a little glass bottle slung outside. The function of the needle is a good illustration of the principle of sympathetic magic, for the charm is supposed to be as penetrating in its action as the needle is sharp and penetrative.

The basis of all *jayan* is coconut oil, which must be made by a girl who has not yet arrived at the age of puberty, but other ingredients, which have been revealed in dreams, may be added, and one of us was informed that the tears of a female porpoise were very potent, but that these were difficult to get, for the porpoise must first be deprived of her young, whereupon she will shed tears, which can then be collected.

The *jayan* must be kept in a place where people are not likely to pass or sit over it, otherwise its potency will be impaired. Just before the charm is applied the owner retires to some secluded spot, makes a small fire, into which scented flowers and pieces of aromatic bark and wood are put, and waves the potion over the smoke, reciting at the same time an incantation, two examples of which are given here.

The potion is rubbed on the bedding or clothes of the person whose affection is desired, or smeared on his or her body during sleep, or else mixed with the ingredients of a betel-nut quid and sent by hand to the desired one.

The recipient is supposed to know no rest nor peace of mind until he or she cohabits with the giver of the charm.

Those who are unskilled in making love-philtres can buy them from skilled friends, and these vicarious philtres are quite as effective as any others.

We append two typical incantations:—

1. Uttered by a woman who desires a man named Jawa.

<i>"Nuan tu ukai jayan ngapa jayan saja.</i>	You are no common or useless potion.
<i>Nuan tu jayan olih aku tindok olih aku nampok.</i>	You are a potion I obtained in my sleep (when) I went to a solitary place. ¹
<i>Ukai nuan tu olih aku nyapai ngapa nyapai saja.</i>	I did not take you as I would have taken anything else.
<i>Nuan olih aku minta enggau piring enggau ading.</i>	I asked to have you and gave an offering for you.
<i>Nuan dibri Kumang Lulong Bintang.</i>	You were given to me by Kumang ² and Lulong Bintang.
<i>Dibri indai Abang Sapantang Mayang.</i>	By the mother of Abang and Sapantang Mayang.
<i>Dibri Puyu dibri Kechu.</i>	By Puyu, by Kechu.
<i>Tu aku nangas nuan enggau menyan enggau santan.</i>	Now I smoke you with menyan (a scented flower), with coconut milk.
<i>Enggau bungai enggau gensarai.</i>	With flowers, with scented things.
<i>Nyadi tu anang bula anang ngapa nuan.</i>	And now be not false or ineffective.
<i>Anang rumban anang saban.</i>	Be not barren or impotent.
<i>Terbai nuan baka burong baka tiong.</i>	Fly like a bird, like a mynah.
<i>Baka tenyalang baka tingang.</i>	Like the rhinoceros hornbill, like the black and white hornbill.
<i>Nyadi jampat nuan baka kilat ngelambai petang.</i>	Be as quick as the lightning flashes before the face of night.
<i>Laju nuan baka peluru leka bangkang.</i>	Be as swift as the bullet made of lead.
<i>Lasit nuan baka sumpit lurus direjang.</i>	Be as rapid as the blowpipe of straight bore.
<i>Jalai baka pemungai naban ka pematang.</i>	Go as far as the pith-wad can carry the blowpipe arrow.
<i>Nuan ga udah ditimang Kumang Lulong Bintang.</i>	Praises have been sung to you by Kumang and Lulong Bintang.
<i>Udah dipuji Jawai indai Ngelai.</i>	You have been praised by Jawai and the mother of Ngelai.
<i>Udah ditentu ka Puyu siduai Kechu.</i>	Both Puyu and Kechu have found out your efficacy.
<i>Nyadi nuan tu ukai jayan ngapa jayan saja.</i>	Indeed you are no useless or common philtre.
<i>Jayan ti tau nuju jayan indu antu.</i>	You are a philtre of direct aim, a philtre of the spirits.
<i>Nuan tu bisa ari tuba olih ngali.</i>	You are more deadly than the tuba ³ root that has been dug up.

¹ A Dyak who wishes to dream of any particular subject or person generally spends a night or two in a solitary hut in the jungle.

² Names of female spirits who dwell in the sky and on mountains and help mankind in dreams; fairies is perhaps a better term for them.

³ *Derris elliptica.*

" <i>Nuan tu munoh ari ipoh empraja jenggi.</i>	You are more fatal than the upas poison taken from the topmost branch of a neighbouring tree.
<i>Pang ari Kapayang rendam sa' pagi.</i>	You are more rancid than Kapayang ¹ fruit soaked for one morning.
<i>Nuan ga udah diuji Kumang serta hari tikup petang.</i>	You have been tested by Kumang about the time of dusk.
<i>Leboh Kling belangkau mansang nyerang lalu nikal pulai ka blakang.</i>	When Kling ² was in his hut on the war-path, he retreated and returned (to his mistresses).
<i>Alai aku baka tu aku ga nyau gila nyau mawa.</i>	I am like this because I have become mad, and I am enamoured.
<i>Ati aku nirai berendam enggai ngejang ka Jawa.</i>	My heart is distressed, sunk down and will not forget Jawa.
<i>Iya enda sinu enda rindu ka aku.</i>	He does not pity or love me.
<i>Labau iya ga bisi nagang bisi ngens-ayang.</i>	Because there are those who prevent and forbid him.
<i>Aku tu ngasoh nuan inggap ngasoh betelap di Jawa.</i>	I ask you to settle on and to sink into Jawa.
<i>Asoh iya nyeringgang asoh iya kekitang.</i>	Cause him to be unsettled, cause him to be in suspense.
<i>Asoh iya irau asoh iya kekitau.</i>	Cause him to be anxious, cause him to be restless.
<i>Asoh iya gila asoh iya mawa.</i>	Cause him to be mad, cause him to be enamoured.
<i>Asoh iya enda dudok asoh iya enda tindok.</i>	Cause him not to sit down, cause him not to sleep.
<i>Asoh iya enda makai asoh iya enda nyumai.</i>	Cause him not to eat, cause him not to cook.
<i>Asoh iya lembau asoh iya irau.</i>	Cause him to be dispirited, cause him to be anxious.
<i>Asoh iya kudi asoh iya ransi.</i>	Cause him to be vexed, cause him to blame himself.
<i>Asoh iya enda turun asoh iya enda mantun.</i>	Cause him not to work on his farm, cause him not to weed it.
<i>Asoh iya agu asoh iya tuyu.</i>	Cause him to be stupid, cause him to be foolish.
<i>Asoh iya nyabak asoh iya kekiak.</i>	Cause him to weep, cause him to cry out loud.

¹ Pangium edule.

² A mythical hero of Sea-Dyak legends (cf. Perham, *Journ. As. Soc.*, Straits Br., No. 2, 1878.)

"*Nyadi tujuh hari udah tu asoh iya* Now seven days from this cause him to
nama kadiri kitu." come to my room to wed me.

2. "You are indeed no common philtre, but the best, the most effectual. I obtained you from the spirits Kumang, Lulong Bintang, Pantang Mayang and the mother of Mendong. They gave you to me upon the summit of the mountain Tian Laju, when I had journeyed there alone with an offering. I saw them in my sleep, I spoke to them in my dream. They told me that you it was who gained them the love of the heroes Kling, Bunga Ming, Laja and Bunga Jawa. Moreover they revealed to me your wondrous potency, for even in the midst of battle the heroes hurried home to seek their mistresses because the days appointed by you were accomplished. I love (name) with all my heart. Night and day he is in my heart but he cares not for me. By the sacred names of the spirits I adjure you to fascinate (name) so that he loves me. I fix seven days from now for you to move his heart. Wherever he be, whether on the farm, on the war-path, sleeping or eating, make him hasten to seek me. Make him like an infant clamouring for the breast. Be as sharp, as penetrative as these needles and may the spirits attend you."

Very like the jayan is the *pemandang* (*pandang*, renowned, well-known), a charm to render a man popular with his fellows and with women, or to make a girl attractive to men; it may even be used by traders to enable them to sell their goods readily and advantageously. The charm may be revealed in a dream, and then may consist of almost anything, or like the *jayan* it may be composed of coconut oil made by a young girl with scented flowers and aromatic barks added to it. Like the *jayan* the *pemandang* must not be kept in a place where people are likely to pass over it. At midnight when the moon is full the owner of a *pemandang* stands on the outer platform (*tanju*) of the communal house, and rubbing some of the oil on his or her body recites the necessary invocation. On the way to the *tanju* great care must be taken not to look about lest a glimpse be caught of some person in the house, who would thereupon become infatuated with the possessor of the charm.

Incantation uttered by a woman who wishes to become attractive to men:—

Nyadi ngabang mansang kita samua Come all of you from up-river and from
ari ulu ari ili ari atas ari ai. down-river from the country and
from the sea.

Ula datui ngosong aku. Come all of you to visit me.

Kena kumbai batu bungai ti ditanam You are called by the flower-stone¹ planted
Jawai siduai indai Abang. by Jawai and the mother of Abang.

Baka nya ga nuan anang ngumbai, Likewise (take care) that you (the charm)
ngepai bini skalika tunang orang. do not call nor beckon to the wives
and sweethearts of others.

¹ The meaning of this term seems quite obscure. A Dyak will say that a spirit planted a tree, and in one of the flowers of the tree was a stone which the spirit revealed in a dream to him as an efficacious charm.

THE MAGIC ORIGIN OF MOORISH DESIGNS.

BY E. WESTERMARCK, Ph.D.

[WITH PLATE XIV.]

LIKE many other people, the natives of Morocco ascribe magic efficacy to the look of the human eye. They believe that an evil wish, either secret or expressed in words, may be transferred by the eye to a person or a thing, and then becomes a fact. They, moreover, believe that there are eyes which radiate evil involuntarily. They tell you of parents and children who have killed each other unawares by an incautious cast of the eye. Certain individuals or whole families have a bad reputation on account of their eyes. People with deep-set eyes, and those whose eyebrows are united over the bridge of the nose, are particularly dangerous. Fair eyes also inspire much fear among the nomadic Arabs and the Arabic-speaking mountaineers of Northern Morocco, where such eyes are rare, and in consequence make an uncanny impression, but not among the Berbers of the Great Atlas, where fair persons are more frequent.

The havoc which the evil eye makes is tremendous. The people say that it "owns two-thirds of the burial ground," not to speak of all the destruction it causes to animals, fruit-trees or other property. Such an enemy must, of course, be resisted by every conceivable means.

Various precautions are resorted to in every-day intercourse. The danger is greatest when you eat. To take food in the presence of some hungry looker-on is the same as to take poison; the evil—*l-bas*, as the Moors call it—then actually enters into your body. When you commence eating, everybody must either partake of the meal or go away. So, also, if anybody shows a great liking for a thing belonging to you, wanting, for instance, to buy your gun or your horse, it is best to let him have it, since otherwise an accident is likely to happen to the object of his desire. On no account are you allowed to praise a thing belonging to another person without adding a word of blessing—*ʔbark allāh*.

In many parts of Morocco a woman is compelled by custom to cover her face when she goes out, so as not to expose herself to the looks of covetous men. The young bride, in particular, is extremely susceptible to all external influence. In the north of Morocco she is therefore taken to the house of the husband in a box on the back of a mule, and none of the guests are permitted to catch even a glimpse of her during the wedding. On the other hand, the eyes of women are also dangerous to men. At popular feasts the women are allowed to eat first, and one reason the natives give for this custom is that otherwise the hungry

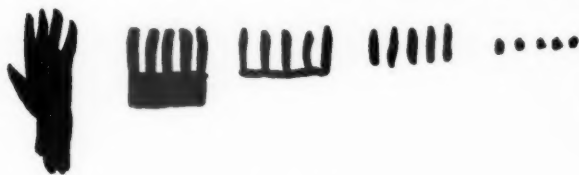
women might injure the men with their evil eyes. The other day, when I was sitting at my writing desk, one of my servants rushed into my room and quickly closed the window-shutters. When I, somewhat surprised, asked him why he thus shut out the light for me, he answered me that some women had come to fetch water from the garden outside my cottage, and that he could not allow me to be exposed to their glances whilst I was writing. He evidently thought that he had saved me from a considerable danger.

But notwithstanding all precautions it is not possible in every-day life altogether to escape the evil look. Various means are therefore resorted to in order to make it innocuous. When a young man, dressed in his best clothes, and with his gun on his shoulder, goes out to a feast, and on the road meets somebody who is likely to envy him his treasures, he places his hand on his back, stretches out the middle finger of the right hand in the direction of the palm of the left hand, turns the tongue backwards in the mouth, and whispers, "May God let your look pass by!" He thus turns off the other person's envious look. When the trees are full of fruit, the bone of a donkey, or a big pot blackened with soot, is hung in some conspicuous place in the garden in order at once to attract the attention of any passer-by and thus divert from the trees the first cast of the eye, which is always the most dangerous. For the same reason, in the threshing season, a big lump of earth is put on the top of the threshed corn every night when the day's work is over. Recourse is also had to various stuffs which are supposed to possess magic efficacy on account of their quality or colour, such as alum, blueing, *henna* (a colouring matter produced from the leaves of the *Lawsonia inermis*), oleander leaves, and others. The mountaineer in the north of Morocco insures his plough against the envy of his fellow-men by making some part of it of laurel-wood. The Atlas Berber protects his animals by hanging round their necks a bit of hyena-skin with the hair on. The Bedouin on the plain, for the same purpose, provides his horse with a little piece of a wild-boar skin. But the most common preventives against the evil eye are the hand and its five fingers, or reproductions of them, or charms containing the number five, as also the image of an eye or a pair of eyes.

When a Moor suspects somebody of looking at him with an evil eye—and if he does not mind being rude—he stretches out the five fingers of his right hand towards the eyes of the other person and says, if he speaks Arabic, *ḥamsa 'ala 'ainek*, or, if he is a Berber from the Great Atlas, the corresponding phrase in Shelḥa, *semmus ghuatnenik*, which means "five in your eye." Or he makes the same gesture first with the right, and afterwards with the left hand, accompanying it with the words, *ḥamsa wa ḥāmīsa 'ala 'ainek*, the diminutive *ḥāmīsa*, "little five," representing the fingers of the left hand. This gesture is not, as it might possibly be supposed to be, intended simply to hide the person from the dangerous look, but its object is expressly to throw back on the other person the evil power, *l-bas*, which has emanated from his eye. This is the explanation which the people themselves give of the hand as a charm against the evil eye.

When thus the five fingers of the hand offer protection against the dangerous look, the same must also be the case with every representation of the five fingers. In magic the difference between reality and image disappears, and little or no importance is attached to the likeness of the image. In some towns, for instance Marraksh, there is hardly a house, and least of all a shop, on the wall or door of which the five fingers are not represented in some way or other. Sometimes you find there the rough image of a hand with outstretched fingers; sometimes only the forepart of a hand, highly conventionalized; sometimes five "fingers" united by a horizontal line; but most commonly merely five isolated lines, longer or shorter, which occasionally dwindle almost into dots. Figs. 1-5 represent a series of these various types. Not infrequently the five "fingers" are provided with a common shaft, as appears from Figs. 6-8.

It is obvious from these paintings that particular emphasis has been laid on the number of the fingers. It is also worth noticing that in the formula which accompanies the protective gesture with the hand—"five in your eye"—the word "finger" is not mentioned at all, only the word "five." The number five has thus by itself become a charm against the evil eye. On a journey which lasts for five



FIGS. 1-5.



FIGS. 6-8.

days or five years, you are in some measure protected by the number of the days or years. The expression, *nhar l-hāmis*, which means Thursday—literally, "the fifth day (of the week)"—likewise possesses magic efficacy. If you fear that somebody is injuring you by his look, you may, instead of saying, "Five in your eye," ward off the evil by the more civil expression, "To-day it is Thursday." And if anybody is speaking of your children in a way which might affect their health or welfare, you had better pass the remark that they are born on a Thursday. To such an extent has the number five been associated with the idea of the evil eye, that it is considered improper to mention the word five in conversation with a superior. Instead of "five" you should say, "four and one."

It is very natural, then, that the magic number five is made use of on amulets.

Figs. 9 and 10 represent two amulets which I picked up among the Arabs of the tribe Mnāšara on the Atlantic coast.¹ One (Fig. 9) consists of five shells attached to a small piece of cloth, the other (Fig. 10) consists of glass beads in five different colours, grouped in two circular series.

Figs. 11 and 12 represent two amulets of an extremely prevalent type, the

¹ All the illustrations are from objects which I have found during my travels in Morocco. Most of them are now in the museum *Antelliska Samlingarna* in Helsingfors.

so-called *l-hamsa*, or "five." The amulets are made of silver, and their protective power depends on their five conspicuous knobs, partly impressions in the plate, partly small pieces of coloured glass, which form together two fives, one larger and one smaller, with the piece of glass in the centre common to both.

On these amulets the knobs are grouped in the form of a cross. Moreover, the five knobs of the inner group are actually joined by a cross. A combination of a five and a cross also occurs on Figs. 13-15, representing parts of ornaments worn by women—ornaments which at the same time serve as charms



FIG. 9.



FIG. 10.



FIG. 11.

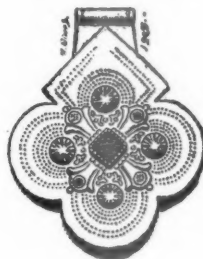


FIG. 12.

against the evil eye. In the centre of Fig. 13 there is a circular knob surrounded by four drop-like impressions in the form of a cross. In Figs. 14 and 15 there is in the middle a circular knob surrounded by eight engraved petals or stripes, which form together two crosses, one larger and one smaller. Here the cruciform petals or stripes, together with the knob in the centre, obviously represent the two fives which in Figs. 11 and 12 are represented by round knobs or pieces of glass. But even the single cross, consisting of two lines intersecting each other at right angles, without a particularly marked centre, is used as a charm against the evil



FIG. 13.



FIG. 14.



FIG. 15.



FIG. 16.

eye. Thus persons of either sex often have a little cross tattooed on the forefinger of the right hand, and in certain parts of Morocco the women have small crosses tattooed on their faces. Fig. 16 represents a charm against the evil eye, which I have seen painted on the head of a greyhound.

Though the cross seems to be regarded as a five, it may be asked why the five is so commonly represented in the form of a cross. The chief reason for this is, I believe, that the cross-form by itself is looked upon as a conductor of baneful energy emanating from an evil eye. Instead of injuring the person or thing looked at, this energy is dispersed by the cross in all the quarters of the wind.

The number five is used to protect not only men and animals, but also lifeless objects against the destructive influence of evil eyes. Figures containing this number are frequently found on guns, pottery, trays, bags, rugs, carpets, and so forth. Such figures often lose their magic character and become genuine ornaments. But that they originally have had a practical aim is obvious not only from their similarity with charms, but particularly from the fact that they still are constantly regarded more or less in the light of charms at the same time as they gratify a desire for embellishment. Some reproductions of designs occurring on various objects will give the reader an idea of the extent to which the protective gesture with the hand, "five in your eye," lies at the bottom of the decorative art of Morocco.

The pottery of the Rif Berbers presents numerous instances of paintings of hands (Figs. 17 and 18), and in many instances other parts of the body also have been added merely for the sake of completeness, although Muhammedanism prohibits the reproduction of human bodies. Fig. 18 shows, besides a double pair of hands, two pairs of outstretched fingers. In these paintings it is impossible to draw the limit between magic and art. They are made by the women, who are particularly versed in the secrets of magic.



FIG. 17.



FIG. 18.



FIG. 19.

The brass hands from which the Jews of Southern Morocco suspend their lamps (see Plate XIV, Nos. 2 and 3), are charms and decorations at the same time. Nos. 4 and 10 on Plate XIV represent two daggers. They are both protected and embellished by five figures in relief on the sheath and the handle. In one case, a dagger from the Rif province (No. 4), these figures consist of three small squares and two round "eyes"; on the other dagger (No. 10) the figures consist of five very conspicuous elevations. Of this latter type, which is prevalent among the Berbers in the eastern part of the Great Atlas, I have seen numerous copies, and the elevations have invariably been five. The natives themselves told me that their object was to protect the dagger against the evil eye.

Fig. 19 is a hand pattern, which is embroidered on the edge of a drapery (Plate XIV, No. 1). Its resemblance to one of the charms painted on the outside of houses (Fig. 7) is obvious.

Fig. 20 represents an ornament which is embroidered on a saddle or horse-cloth from Glawi in the Great Atlas (Plate XIV, No. 8). Fig. 21 is from a Berber gun.

In Fig. 22, the same pattern is doubled. That this design, which is extremely frequent on metal-work, represents two fives with a common centre, is proved by

the fact that each alternate petal is dulled whilst the others are burnished. The eight-petaled rosette, with or without a common well-marked centre, and with the petals embroidered in different colours, is a very common ornament on bags. The two bags reproduced on Pl. XIV, Nos. 5 and 6, show typical instances of this ornament.

Fig. 23 represents a design on another bag (Pl. XIV, No. 7), which is something intermediate between an eight-petaled rosette and a double-cross with well-marked centre. Figs. 24 and 25 are patterns painted on leather pouches. They obviously prove that round spots and lines in the form of a cross, represent one and the same idea, the number five.

If now Figs. 20–25 are compared with Figs. 11–16, the similarity between them is very striking. The figures with which the Moors decorate their objects are thus largely identical, or almost identical, with those figures representing the number five by which they protect themselves or their animals against the evil eyes of their fellow-men. And in most, or all the cases referred to, the aim of the design is not only to embellish, but also to protect the object on which it is painted, embroidered, or engraved. This is the case both with the simpler figures



FIG. 20.



FIG. 21.



FIG. 22.

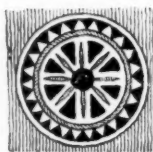


FIG. 23.



FIG. 24.



FIG. 25.

and with the eight-petaled rosette, which is found as a charm on both sides of entrance gates.

From the double-cross and the eight-petaled rosette, however, new figures have been evolved. By joining the extremities of the two lines which form each of the two crosses, a new design has arisen, a double square, which is very common on metal and wood-work, as also on embroidery. Figs. 26 and 27 are designs from the same embroidery (Pl. XIV, No. 1), where they occur side by side with each other. That Fig. 26 is regarded as a double-cross appears from the fact that the two single crosses are embroidered in different colours; and many circumstances indicate that the two intersecting squares have developed out of a double-cross. When the artisan has to paint these squares on a wooden plate, he first draws a double-cross, which he afterwards paints over. In Fig. 27 we also find that one of the crosses has been partially preserved within the squares; and besides, those points in which the two crosses would have intersected the sides of the squares, if they had been preserved, are still clearly marked. That the sides of the squares are only to be regarded as lines joining the extremities of two crosses which consist of radii in a circle, is moreover proved by the circumstance that the same points are sometimes joined, not by straight lines, but by curves, which of course give to the figure a different appearance. Figs. 28 and 29 are

designs which are found in the middle of two metal trays. Both of them are derived from the same figure, a double-cross. In Fig. 28, the lines joining the extremities of each cross are straight, in Fig. 29 they are curved.

It may be asked why the extremities of each cross have been joined at all. Perhaps the desire for variety is a sufficient explanation; but I believe that there

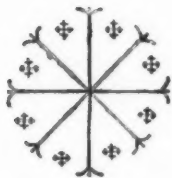


FIG. 26.

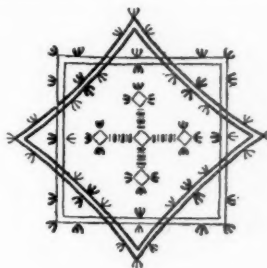


FIG. 27

may also be a deeper motive. It will soon be shown that not only the hand and the number five, but also the image of an eye, or a pair of eyes, is used as a charm against the evil eye, and that these preventives are very commonly combined with each other. As appears from the "eyes" on the dagger from the Rif province (Pl. XIV, No. 4), and from certain amulets against the evil eye, the eye is also

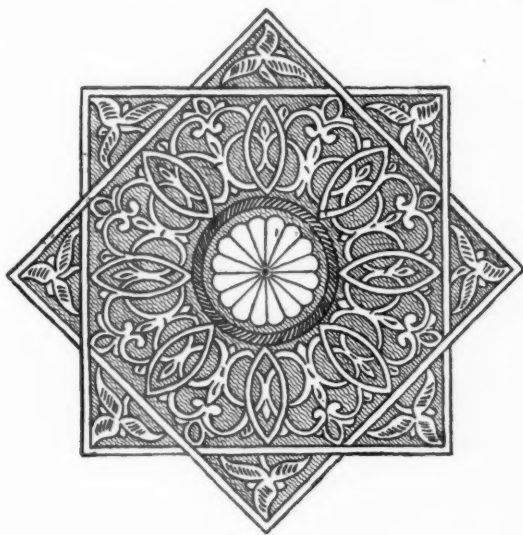


FIG. 28.



FIG. 29.

represented in the shape of a square. It therefore seems by no means improbable that the two intersecting squares represent a pair of eyes. It is certainly worth noticing that the intersecting squares themselves, drawn on a paper together with some magic words or signs, are used as a charm against the evil eye. The intersecting squares also occur as the main figure on one of the amuletic brass hands reproduced on Pl. XIV, No. 2, whilst on other similar hands we find two

intersecting triangles, a figure which is still more likely to represent a pair of eyes.

The intersecting squares have given rise to the empty octagon, which is commonly found on wood-work, either painted or cut out. By painting over all the lines which fall within the two squares, the artisan produces an empty octagon, and so also by hollowing the two squares. Wooden plates, containing a great number of such holes, are used as windows.

In the intersecting squares the joined extremities, or the angles of the octagon, are at the same distance from the centre; in other words, the two crosses from which the intersecting squares and the octagon are derived consist of radii in a circle. But it may also happen that the extremities of the two crosses are at different distances from the centre. Fig. 30 represents a silver amulet against the evil eye, containing three fives with a common centre, grouped in the form of crosses of varying lengths. If the four side-knobs in each five are joined by straight lines, there arise three squares of different sizes, as is seen in Fig. 31. This figure, which is thus based on the number five, is also used as a charm against the evil



FIG. 30.



FIG. 31.

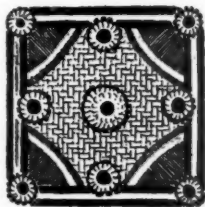


FIG. 32.

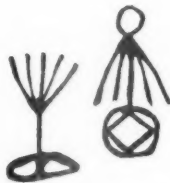


FIG. 33. FIG. 34.

eye. That the three squares, together with the common centre, represent the number five is all the more obvious as the largest five is specially marked. The same conclusion is also corroborated by a design occurring on a Moorish fan, consisting of a larger and a smaller square, the one inscribed in the other, exactly as the two interior squares in Fig. 31, but with all the eight corners well-marked—in other words, it is a double-five and a double-square at the same time.

As appears from the figures referred to, there is a general tendency to produce the number five doubled both on charms and in designs—as a double-five, or a double-cross, or a double-square, or an eight-petaled rosette. The cause of this tendency probably lies in the fact that the protective gesture with the hand, which is the origin of the magic efficacy ascribed to the number five, is performed both with the right and the left hand. This supposition is strongly supported by the circumstance that the inner five on the amulets of this type is called by the same name as the left hand's fingers in the formula, accompanying the gesture with the hand, namely, *l-hāmīsa*, "the little five." But, as appears from some of the amulets reproduced, it happens that the number five is represented not only doubled but tripled; and the same tendency to multiplication occurs in the

decorative art proper. Thus the eight-petaled rosette has developed into a sixteen-petaled rosette, a very common design, especially in the centre of trays (see Figs. 28 and 29). The design in the centre of Fig. 29, particularly, proves that two petals have developed out of each of the original eight.

Besides the fingers of the hand, there is another means of throwing back the baneful power, *l-bas*, which emanates from an evil eye, namely, the image of an eye. If baneful energy can be transferred by the eye, it can obviously also be thrown back by the eye. The image of an eye, or a pair of eyes, is therefore very commonly used as a charm.

Figs. 33 and 34 represent two paintings which I found on the interior wall of a small Moorish-coffee house. They are charms consisting of images of hands and eyes. In Fig. 34 one eye is made in the form of a square and inscribed in the other, a circumstance which seems to give additional strength to my previous conjecture that the intersecting squares, also, are meant to represent a pair of eyes.

Fig. 35 is a pattern from a drapery (Pl. XIV, No. 1). The "hand" is of a type which we have already met with among the charms painted on walls (Fig. 7). Figs. 7 and 8 are likewise a combination of hand and eye, the round dots



FIG. 35.



FIG. 36.



FIG. 37.

representing eyes. They are here placed in such a way that one might almost suppose them to be intended rather to illustrate the gesture "five in your eye" than to represent eyes which throw back the baneful power of the evil eye.

Fig. 36 represents the middle part of a charm made of glass beads of varying colours. The charm contains altogether five pairs of eyes, of which only two pairs are seen in the figure. The Arab girls in the tribe *Mnášara*, from whom I received the object, drew my attention to the eyes and their magic efficacy. They expressly said that their object was to protect the person against the evil eye. It is probable that the piece of glass in the centre is also intended to represent an eye.

Fig. 37 represents a painting which I have found on the outside of a small box in which people keep their gold. The painting is undoubtedly in the first place intended to protect the box and its contents against the evil eye. Eyes of a similar type are painted on Rif pottery (see Figs. 17 and 18).

One of the most beautiful designs, to which the belief in the evil eye has given rise, is embroidered on the cloaks worn by the Berbers of the Great Atlas (Fig. 38). Almost the whole back of the cloak is covered by a colossal eye, generally orange-coloured, with an elaborate embroidery in the middle, obviously

representing the pupil. It is undoubtedly an excellent idea thus to protect yourself against enemies who try to do you harm behind your back.

Figs. 39-42 represent pairs of eyes of different types. The originals are of bone inlaid on Berber guns from the South of Morocco, and are evidently meant to serve as charms. Of particular interest is the conventionalized head of a man in Fig. 42, which is put there on account of its eyes.

Fig. 43 is a design painted on a small brass box in which the Moor keeps his prayer-book. The round piece of glass in the middle is light blue; blue eyes, as already said, are especially liable to transfer, and therefore also to throw back, *l-bas*. The design is a combination of eyes and a double-five. Round the eye in the centre there are four pairs of eyes, which, together with the centre, form a five; and there are moreover four single eyes, which, together with the centre, make a



FIG. 38

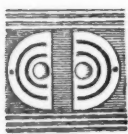


FIG. 39.



FIG. 40.



FIG. 41.



FIG. 42.



FIG. 43.

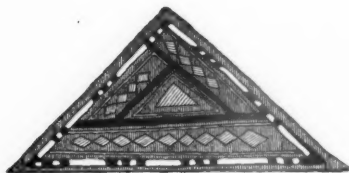


FIG. 44.

“little five.” And all these figures are placed within a big eye. Many of the figures reproduced above present a combination of the five and the eye. In Figs. 11 and 12 the double-five consists of eyes, of which the blue piece of glass in the centre particularly attracts our attention. In Fig. 10 there are two eyes made of glass beads. Figs. 13, 14, 15, 21, 22, 23, 28, 29, 31, and 32 have an eye as their centre. Figs. 21, 23, 24, and 25 represent an eye. The bag, which is reproduced on Pl. XIV, No. 7, is protected by many eyes, each of which contains a double-five inside (see Fig. 23). The five shells in Fig. 9 are charms against the evil eye, not only on account of their number; shells are used as charms, as it seems, also because they have the form of an eye. Just as the number five has come to represent the five fingers of the hand as a charm against the evil eye, so anything curved has become a charm, because the eye is curved. The crooked tusk of a wild boar is a common charm against the evil eye (see Fig. 31); and the Jews in Morocco

make silver charms in the shape of a crescent. Perhaps, also, the use of the horse-shoe as a charm against the evil eye is due to the fact that the horse-shoe is curved.

The eye is, moreover, represented in the shape of a triangle. Fig. 44 is a design which I found on a gun-bag of leather, and there can be little doubt that it is intended to represent an eye. In this case the triangular form lends itself best to the material. The mountaineers of Northern Morocco also have big triangular designs on their bags, side by side with small circular "eyes" simply impressed in the leather by a round instrument. But if the eye is thus conventionalized into a triangle, we may suppose that the two intersecting triangles with a small round



FIG. 45.



FIG. 46.



FIG. 47.



FIG. 48.

figure in the centre (Fig. 45) are a conventionalized pair of eyes with a common pupil. This figure is very prevalent. It occurs, for instance, on Moorish coins, and, drawn on a paper and provided with inscriptions of various kinds, it is used as a charm against the evil eye. One of the brass hands from Jewish lamps, reproduced on Pl. XIV, No. 3, contains not only two intersecting triangles, but in the middle of the hexagon formed by them there is an interesting image of an eye.

Fig. 46 shows another type of the eye: a round spot representing the eye and above it a conventionalised eyebrow. I found this design tattooed on the



FIG. 49.



FIG. 50.

arm of one of my servants, an Arab from the province Shawia, and he told me that similar tattooings are common charms in his tribe. The reason why in this case the eyebrow is made in the shape of the two sides of an angle is not difficult to find. It is easier to incise into the skin two straight lines than a curve. There is an obvious resemblance between this charm and Fig. 47, which is embroidered on a saddle or horse-cloth from Glawi, in the Great Atlas (see Pl. XIV, No. 8). The eye itself is here triangular, whereas the eyebrow has exactly the same shape as that tattooed on the arm. Now, if this figure, instead of being embroidered, is to be woven, it must of course be adapted to the requirements of the technicalities of weaving. I venture to believe that the designs represented by Figs. 48 and 49 are

nothing but rows of eyes and eyebrows. These and similar patterns are extremely common on Berber carpets (see Pl. XIV, No. 9). They also undergo various combinations and simplifications. Thus by placing two rows of eyes and eyebrows opposite each other, a design has originated in which not the triangle, but the square is the most conspicuous figure (see Pl. XIV, No. 9). Another combination of the two rows of eyes, together with a process of multiplication, very common in decorative art, has produced the design shown in Fig. 50. On the other hand, it seems that the single zig-zag line (Figs. 51 and 52) is a row of conventionalized eyebrows. Fig. 51, in particular, is exactly similar to the eyebrow line in Fig. 48, the only difference between the designs being that in Fig. 51 the eye itself has been left out. This pattern occurs on the very same carpets, or cloths, where the fuller design is found.

Many of the patterns here reproduced are no doubt old acquaintances to the reader. They are very common among ourselves, on carpets, rugs, tapestry, wall-papers, trays, china, and so forth. What I have said as regards their origin and meaning refers only to Morocco. The same design may in different cases have



FIG. 51.

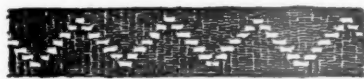


FIG. 52.

had a different history. But, on the other hand, we must remember that the belief in the evil eye prevails in all Mediterranean countries, as also in India, Persia, and probably many other parts of Asia; that the hand and the eye are very common charms against the evil eye; that a great number of Eastern designs are identical with, or very similar to, the designs of Morocco; and that many European designs are known to have an Eastern origin. It seems extremely probable that the belief in the evil eye has exercised a very extensive influence on decorative art, although this influence, so far as I know, has largely escaped the attention of students. Nothing, indeed, is more natural than that people, to the best of their ability, should endeavour to protect their property against the danger which, in their opinion, threatens it from the envious eyes of their fellow-men. But, as I said, far-reaching generalisations do not fall within the scope of the present article. The only fact of a more general nature which I wish to emphasise is, that the student of the decorative art of a people should so far as possible make himself acquainted with their superstitions.



THE MAGIC ORIGIN OF MOORISH DESIGNS.

NATIVE STORIES FROM SANTA CRUZ AND REEF ISLANDS.

TRANSLATED BY THE REVEREND W. O'FERRAILL.

SANTA CRUZ.

Sickness.

WHEN anyone begins to fall sick he seeks a doctor (*meduka*), and when the doctor comes near the sick man he stiffens his body, and all those in the house think a ghost has entered into the doctor, and they are all very quiet. Some doctors tell the sick man's relatives to kill a pig for the ghost who has caused the sickness. When they have killed the pig they take it into the ghost-house and invite some other men, and they eat with prayers to the ghost; and the doctor takes a little piece and puts it near the base of the ghost-post, and says to it: "This is thy food; oh, deliver up again the spirit of thy servant, that he may be well again." The little portion they have offered to the ghost is then eaten; but small boys may not eat of it.

Concerning Death.

When a rich man is dying, and knows it, he divides his property beforehand, part to his own son, part to his brother, part to other relatives. On the day of his death his wife and those in the house begin to fast: they don't eat cooked food at all, only raw, some for a short time, about a week, some for a very long time; and every day they smear their bodies and faces with charcoal. The widow puts on her head a very torn and dirty cloth, and does not go about, but lives like a prisoner. At mid-day she weeps in her house and remains wholly at the place where her husband is to be buried; and they bury him just on the very spot where he died. While his body still lies above ground, and while the people are still weeping, they hang out, in order on a beam near the body, the money he has divided so that all may see.

Concerning his widow: after some time has elapsed, anyone among his brothers or relatives will take her to wife instead; the brother will buy her also, but not with a large sum, as at first, for they take into account the sum his brother gave at the first.

Concerning Marriage.

When a man is betrothed to a woman he gives at first to her father a sum of money; this sum makes the woman *tapu*, lest anyone else might buy her. And, when the woman is bought, the bridegroom must not see his mother-in-law's face as long as he lives; he must not speak her name; it does not matter if it be any article or thing of hers near, he must give it a different name.

Moreover, the mother of the girl may not speak the name of the man, and may not look at him; and also those to whom he paid a sum to buy the girl. If he gave to many men then none of them may speak his name or look him in the face; if one of them should look at him by chance the bridegroom will destroy some of that man's property. But his father-in-law may look at him, but may not speak the very name of the man who marries his daughter, but gives him a different name (their ideas about this custom are very strange indeed). Also, if a woman die in childbirth her husband must pay for her again to her relatives: (1) he pays to the woman's relatives from whom he bought her; (2) he pays his own kinsman for the child that is dead because his kinsman helped him to bury his wife, for they desire that children should be born to their relatives.

Concerning Food.

Every year the people plant yams and tomagos; and when they begin to work and have made ready the place and begun to plant, first, they offer to the ghost who they think presides over foods. There is an offering place in the bush, and they go there and take much food, and also feather money. Men, women, and children do this, and they think the ghost notices if there are many children, and gives much food at harvest; and the ghost to whom they offer is named *Ilene*. When the bread-fruit begins to bear they take great care lest anyone should light a fire near the bole of the tree, or throw a stone at the tree. The ghost, who they think protects the bread-fruit, is called *Duka-Kane*, or *Kae-Tuabia*, who has two names; they think this ghost has four eyes. Sometimes the ghost of a village forbids the people to eat certain food. If there is a *meduka* in that village he says they must not eat a certain shark, called *Poano*; then they do not eat of it all their lives. A certain yam, also in the same way, is called *Numabo*; also a fish called *Ape*. All the families of Santa Cruz think this. Sometimes fowls, bread-fruits, nuts, coconuts (when the coconut is young and the eye is red), sometimes *Barringtonia* nuts. From all kinds of foods they will select one, and think that they will die if they eat that one, or, at least, that very bad sores will trouble them.

Concerning the Sun and the Moon.

Long ago we thought about the Sun and Moon thus: they two always went together in the day. And the Sun thought to himself thus: if we always go together the earth will become very hot and the trees will all die. So it came to pass as they drew near a marsh the Sun crossed over before the Moon; but he deceived her, saying that he had crossed over on the branch of a tree (and it was rotten). And the Moon fell into the marsh, and after that she was black, and then she washed herself partly; but the Sun had already gone a long way ahead while she was washing, and it became night, for a part of the Moon was black. She has not finished washing yet, for she wants to catch up to the Sun so that they can walk together as at the first.

Concerning the building of a Canoe.

Only some men may dig out canoes; those whose ancestors dug them out. When a father is near death, that father takes water and washes his son's hands, and they think that the father is giving to his son understanding and wisdom to build canoes, and he signifies it through water. When a man has finished a canoe he takes it down to the sea and paddles very far, and makes it roll on the surf, and then he thinks he drives away the ghost from the adze with which he dug out the canoe, and the ghost of the spot where he cut down the wood for the canoe.

Concerning Broken Food.

Among the heathen a custom prevails that if they hate anyone they take from him a piece of the food he was eating, or a bit of his loin-cloth, or any piece of his near possessions, and put it in the ghost-house and curse the person whom they hate, and he dies outright.

Concerning Sun and Rain.

The heathen thinks a ghost makes the sun to shine and the rain. If it is continual sunshine and the yams are withering the people assemble together and contribute money, and string it to the man with whom the rain-ghost abides, and food also, and beseech him not to do the thing he was doing. That man will not wash his face for a long time, he will not work lest he perspire and his body be wet, for he thinks that if his body be wet it will rain. Then this man, with whom the rain-ghost is, takes water and goes into the ghost-house and sprinkles it at the head of the ghost-post (*duka*), and if there are many ghost-posts in the house he pours water over them all that it may rain.

Concerning White Folk.

Long ago our fathers thought thus about white folk: that they were spirits. When a ship came near they did not speak aloud, but very softly; they thought the people out in the ships would hear what they said about them, and anyone who had sores or was sick did not come down to the beach lest the white folk should see him and lay a spell upon him.

Concerning Tapu.

If people value anything they seek for a thing called *Dabo*. It is not a ghost, but they think *malete* (*mana*) is in it; they seek the man who guards it, for not every man possesses it. And they do thus: that man cuts off portions of four or six different trees and covers them with a thing called *ngeklo* (*malete* is in it). He cuts also from a different tree four branches, and covers that also with the other pieces which he has cut, and stands near the thing he makes *tapu*, and they think thus about it: no one can go near it or it will make his legs and knees weak and kill him. The heathen fear greatly because of this. If a coconut is made *tapu* no one likes even a dry leaf of it for a torch.

Concerning Ourselves.

We thought our ancestors came from various different islands. We at Te-Motu thought we came from Te Mami. We dwelt there, and because of the volcano we fled away; but some of us are like men of quite a different country, and yet they are of our own family. The coconuts in our island belong to them, and we think that they came from away beyond Temotu; but others of us had arrived here first and the land belonged to these, and those others have only one small piece of land and the coconuts.

Concerning an Old Man and Woman.

That old woman was a *meduka*, and they thought that she was very wise, for a long while ago, when our ancestors were still heathen, she spake thus: "Presently your children will hear of a new custom, and that custom will be better than our customs are now." And now the custom of Jesus Christ has reached us, and we think this is that which the old woman spake of; and she said also, that when she died her spirit would go above.

There are many stories about this old woman, but I do not know them well. The old man was like the old woman for he said, "In time to come many of the villages shall be desolate." Formerly the Santa Cruz folk were very many, and they built new villages. But those villages are all desolate and only the older ones are left. Beyond Vena (Carlisle Bay) were many villages, but they are destroyed now; beyond Vena there is practically no population.

Concerning Holy Stones.

I know of two. One has been there for ages. When they plant yams they often offer on that stone, they take much food and money also, they choose a long piece and wind it round the stone; then they eat. At harvest also they do this. The name of the stone is *Kio* (bird). The offering they make is a fowl, for they do not want the wild fowls to destroy the crops, therefore, they offer it on this stone as a sign to drive away the fowls. The other stone is like a big fruit, and four small ones are near it; they call it *Metabo*, and they think that it came from Te Mami (the volcano). They take great care of stones which come from there and reverence them.

Concerning Meduka.

If anyone's child dies when still a baby, the father thinks that its spirit comes back to dwell with its father or mother, to help him to become rich and to give him *malete*. Therefore he takes another *Meduka* and walks about the island with him among the people, that all may know that he too has become a *Meduka*. When he hears of anyone who is sick he visits him, and says that a ghost has shot him; he takes a piece of wood, a tree that he chooses, and puts two or three little stones in it, and places the end of the stick on the place where the pain is. Then he takes it away and releases the stones which he has put in the stick, and he says

that these are the arrows of the ghost who has shot him. But these stones he himself put there.

REEF ISLANDS.

Concerning Lata and Sinota.

This Lata was he who created this world and the things in it. He was very wise. The heathen pray to him, and offer to him pigs, and pray also to him for every fruit-bearing tree that it may bear fruit. Now Lata and Sinota had a dispute about a canoe. Sinota went into the bush to chop a canoe, but he could not find a good tree for it, and when he had sought in vain, he took an axe and chopped Lata's canoe, and in the morning Lata's canoe lay on the ground and was chopped in pieces. When Lata saw it he thought, "What has done this?" Then he sat down and sang a song; and he looked again and saw that his canoe was chopped with an axe, and that someone had chopped it; and when he had finished his song, the canoe came together again as if no one had chopped it. Then Sinota took his axe again, and went to seek Lata's canoe, that he might destroy it utterly, but when he came to the place it was standing upright again as though no one had chopped it. Then he began to chop it again, and as he was chopping a chip sprang up and fell into his bag, and when he went back to the village the chip still remained in his bag. In the morning Lata arose and went again to the place, and he saw that the canoe was chopped again, and he sat down and sang a song again, and as he sang the canoe desired to come together again but could not because the chip was not there, but in Sinota's bag. And while he sang Sinota heard the chip in his bag jumping about; then he arose quickly and took his bag and axe and ran to Lata, and Lata said to him, "It was you who chopped the canoe." He replied, "Yes, it was I; why do you question me thus? It was not your canoe." And Sinota said, "Yes, it was mine." And they two began to quarrel about it, and Lata said to him, "Very well, you say it was yours, speak as I do." And Sinota tried, but was not able. Then Lata took his axe and chopped another canoe in the bush, and they brought food, a great quantity, to feed the people, that they might draw it down to the sea. And on the day appointed, the food for the people was ready, and they assembled together in the place where the canoe was, and they said that he had made the canoe heavy, for they fastened two ropes to it, very strong ones, to draw it down to the sea, but they were not able. Then Lata said to them, "It is all one, don't bother; it shall stay here, and you go back to the village." Then Lata sat down and began to sing a song, and the canoe began to move of its own accord down to the village. But Sinota did not do this; he made ready food for the people, and they came and tied his canoe to two great ropes, and they drew his canoe into the village, and the people said he had no *malete*. Then they two made ready their canoes, and took them down to the sea, for Lata had deceived Sinota about the tying it together. Lata showed him the plant which we use for mats and said to him, "You use this," and Sinota thought Lata spoke the truth. And Lata tied his canoe with coconut fibre, but over it he put the other

fibre, so Sinota thought that Lata had tied his canoe with mat fibre; he did not know of the coconut fibre beneath. Then when Lata reached the island, his food was finished in the canoe, all but one chestnut and it brought forth fruit. Then Lata threw out a rope, and a mouse followed the rope and brought a bag, and he drew in the bag, and water sprang out from the bag. So he reached the island.

Concerning the Volcano Tinakula (Te Mami).

This was the beginning of it. It was a man, and his mother bore him when he was already rather big; moreover he came into existence like a hot fire. His mother wove a loin cloth for him, but on the first day he wore it, it was burned up. And so it happened continually. Then his father and mother scolded him from morning till night. So he grew sulky, and he went away saying that he was full grown now; but when he came to that place where he now is, his feet had become too short. So he stands there for ever. They say that the stones which go forth from the crater and fall into the sea, enter into it again and are thrown out again, and so it is continually. This is the tradition at Nufiloli, but at the big island they say that it was once part of the big island beyond Neko.

A Tradition of Nukapu.

They went to dance at the time of sunset, and waited for darkness. And when it was dark they came to a cave where a woman lived alone with her little son; he was still a baby and he cried. And one man came to her and said, "You stay here with the child, and I will go and wash its *ma'o*." And it was raining heavily, with lightning and thunder, and when he went down he saw a Tongoa canoe. He saw men disembark, and it was low tide, and they were very tall, and they ate food. Then they sang a song, "*Loliëlömanga ia ia takuk lolimanga*," and when he had seen, he ran and told the woman, who was taking care of the baby, about it, and she came down and saw for herself; and when she had seen she climbed up and cut coconut leaves, very many, and dressed up as a ghost and said to him, "Let us go into the ghost-house." And they two went in, and she prayed to the ghost, "Make them all come here into this house"; and she went and sat near the door and took a conch shell with a sharp edge, and as she sat, one Tongoa man came in, and she struck him in the forehead, and she killed about four hundred thus. And the blood flowed on to the coconut leaf mats, and those who followed slipped in the blood and they called out, "We Tongoa folk are all dead." And when the others afar off heard, those near the canoe embarked quickly and pulled up the anchor and went off, and some fled into the bush and dug a hole, and they lived there. And the hole is there still.

Concerning Spirits.

Our people think thus about spirits: they reverence a certain tree, and when it is dead they kill a pig, and after they have chopped it down they take coconut leaves and bind round it, and when they have put it into the club-house (*Madai*)

whoever knows a pattern carves it according to that pattern. And when they have carved it they blow a conch, showing that now there is *malete* in it, and they put money and food, for a sign that there is *malete* in it to shield them from sickness. And when they want to hold a dance they make a great feast, and portion out each club-house, and on that day the people are all gathered together for the dance. They have set the post up in its place in the ghost-house. They seek out a pig and food of different sorts and put it in one place, and when they see there is very much food they offer it first. They take a sago palm leaf and put it above the ghost-post (*duka*), and they put food at its base and speak to it, and some beg for money and some for all kinds of food. And on the day when the dance is ended, in the evening, they take a food bowl, and put leaves of that tree into it and water, and it remains there till daylight. And before dawn, while it is still dark, they all assemble, and that water is their sacred water for washing away their sicknesses from them.

Some say that the first spirit was "Tangiteala"; he is a Taumako (Duff Island) spirit, and he is very powerful; they make great feasts to him and pray to him, and if there is heavy rain or lightning or much thunder they say that he is sulky or that he is angry. And when a canoe drifts they pray to him for wind, and when they reach land they take a sucking pig and prepare food and go into the ghost-house and stand, and the caretaker comes and takes a green coconut and leaves of a tree, and splits the nut and sprinkles the milk on them, and that is holy water to them. No one can take a bow and arrows before Taumako, for if he saw a bow and arrows he would shoot whoever so erred. The man takes food and offers a portion and he takes others with him and they all go and offer, and after they have offered they give thanks.

Concerning those who are dead.

They think that they are still alive, but are in different form. They say that there are two divisions. To one, a man goes when he dies and the rest put him in their midst and dance around him for ten days. Then they test him after their manner. If he is very strong they place a slab of wood over the mouth of a deep hole with water in it, and they tell him to stand upon it, then they tilt up the wood and he falls into the pit; and a big fish dwells in the pit and it eats him up, and when he has been devoured, they take a little of his blood and set it apart for five days and it turns into a man again and goes into the other division. Thus they think of the dead.

Concerning a man who dies of an arrow wound.

When an arrow kills anyone the ghosts come and wait for that man, and they take him with them and make him different. And those who are killed in battle are different from those who die of sickness. Those who die in battle turn into flying ghosts, and those who die of sickness do not.

Our thoughts about a great spirit called Thaumaka, who lives above the sky.

When they offer to him they make ready food in the daytime. And just before dawn they go into the ghost-house, and after they have prayed they climb up a tree and blow a conch shell, and those who remain on the ground keep calling out, "*Tangaloa ito ito ia ito ito.*"

This concerning an abundance of food.

When the fruit of trees that are eatable, such as bread-fruit, or ninas (nuts) is nearly ripe, about a month before the time that people eat it, they all go together into the bush. They must all go together for this "holy eating," and when they return they all assemble in one place, and no one will be absent; they sit down and cook bread-fruit. While it is being cooked no one will eat beforehand, but they set it in order and cook it with reverence, and with the belief that the spirit has granted that food to them and they return thanks to him for it. When it is cooked a certain man takes a bread-fruit and climbs up a tree, and all the people stand on the ground and they all look up, and when he has reached the top they shout out, and when they have shouted they call out, "This is the bread-fruit of the whole land"; then he throws down the bread-fruit and they pick it up and shout out again and give thanks, for they think that the spirit who protects the fruit will hear.

Their thoughts are thus also with regard to the yam, there is no difference, it is all the same; they think that a spirit gives them food, and the people assemble together and thank the spirit. In every island they think that there is a spirit presiding over food. In three islands, Utupua, Vanikoro, and Tēmami, they do not carve *dukas* (ghost-posts) but they show reverence and believe that there is a presiding spirit. They build a "holy house," but there is nothing in it, it stands empty, and if any sickness seize a man, and he does not die quickly, they take him in there that he may die quickly. And concerning things they greatly think about, such as charms and broken food, they think that there is *malcte* in them, and that the spirit helps and gives *malcte* through them; they think this when they kill a pig for an offering, and if not, that man will die, and they don't spit anywhere, and do not leave pieces of food lying about.

A Story of a Certain Woman.

There was a certain woman who was *enceinte* and her kinsfolk made a great feast, for her nearest kinsman also said that he would make a great feast, and he came to the big island to Pevo, and he went to the place where she had not yet brought forth the child, and he stayed there for a long while; and this man had married one hundred wives. And when the child was grown up and a young man, he was very handsome and he lived altogether in the club house. In the night he went to work, but in the daytime he went back again into the club house and dwelt there. And so it was every night he worked in the garden of his kinsman's

wives, but he did not work in the last one's garden. And when the wind was favourable the kinsman returned and they told him that his kinsman had arrived. And he went down and took a mat and put it on his shoulder and went with it, and when his kinsman saw him, he said softly to himself, "Whence is this great man," and he began to be jealous of him and hate him, and he questioned the people, "Who is this man?" and they say to him, "This is your kinsman." But when he heard this, he was very angry, and he said to his wives, "You go and work," and he went with them, and began to question them, and he began with the first until he had questioned them all. And the son began to inquire, "Who is that working in the garden with my mother?" But they did not tell him, but they said, "It is your kinsman." And he made as though he would sail to another island, but he pretended only, and they prepared food for his voyage; and when he came near the place he turned round and went northwards, and he did not eat any food at all nor did he drink, and his body weakened, and dizziness came over him and no one relieved him at the steer oar. He only held it until he was near the island, then he tacked and reached Nole. And he was very weak and lay on the beach and cried bitterly; and as he cried a tree said to him, "Don't cry," and he looked up but saw nothing, and so laid down again and cried again, and the tree spoke again, and he looked up but saw no one; but the tree said to him, "It was I who spoke to you, I this tree that you see"; and he went and sat down at its bole, and it said, "Break off one root," and he did so. And he perceived a fire burning and he cooked food and ate. Then he slept all night in the track of the stars as they looked down upon him. And the stars came down and spoke to the tree, "Do you smell a man?" and it replied, "You smell a man because you go to and fro always, but there is no man here." Every night they came down to catch fish. One night the tree instructed him, "To-day at midnight when they come down you follow them"; and he did so and followed them, and as they caught fish he took the fish, and when they came back they kept seeking for the fish, saying, "Where is the fish?" But he had gone back already to the tree; and he did so every night. And one night the tree said to the stars, "My son is here, go and fish and take great care of him." But they said to it, "You are a fool, this is a man, and you have not told us," and they took him and went, and when they came back they gave him fish, and when he had eaten he slept. And one night he besought them to fly away with him into the sky; and they took him up into the sky and he dwelt there. And he saw when the wives (of his kinsman) were *enceinte*; and, when they were near the birth, he cut open their wombs and took out the babes and took them away, and taught them to gather together money for him. And he lived a long time there, and presently the stars said to him, "Do you wish to return to your country?" And he replied, "I wish it, but how can it be?" So they made a great raft, and put his property upon it, and let him down to his home; and the people rejoiced greatly. And he sat and waited for his kinsman who had driven him away, and when he saw him coming he shot him, and when he was shot he died.

A STORY ABOUT "LONG-AGO" AT TAUMAKO (Duff Island).

Concerning a man who ate human flesh, and a very big pig.

They two ate human flesh and dwelt on the other side of the island; and that man was called Tepkakhola, and that pig was called Ulaka. And they two ate men, until there was scarcely anyone left, only ten brothers and one woman still remained. Then they met together and said, let us build a canoe and flee away from here, and they worked till the canoe was finished; then they made ready the food. After that, in the evening, they began their journey, but their sister had a very big foot; and alas! for her, when she lifted up one foot the canoe turned over; then she tried with her first brother, but when she lifted up her foot the canoe sank, and so she tried with all her ten brothers, but it was so with them all. Then she said to them, "Very well, it is all one, let those two devour me," and they were very sorry for her, and they said to her, "We will make a cave for you"; and they dug out a very big cave, and carried much food into it, and very many coconuts into it, and placed slats of wood at its mouth, and when they had covered them over with earth, they sailed away and reached "Metema" and dwelt there. But the woman lived altogether in the cave which her brothers had made for her. And the slats at the mouth of the cave rotted. One day as she was sitting, two lizards came into the cave, one was chasing the other, and they two jumped down her throat, and she thought to herself, "Why have these two lizards entered into me?" And so it was that in about a month's time she perceived that she was *enceinte*, and presently she bore twins, and she nourished her two children till they were grown up and were very strong. And while they were still children they asked their mother, "Why is it that we three live together in this cave?" And when they had become young men, one shot and pierced through the door, and they saw light for the first time. Then they spake together, "What is this thing?" and their mother told them. Then they said to their mother, "Make ready coconut leaves for a torch," and their mother did as they told her; she took some and dried them in the sun; and when it was evening, she made them into a torch for fishing, and they two directed her to go to the place where the water springs forth from the rock, and that water is called "Tutu." And she went, and while she was seeking it, Tepkakhola saw the fire afar off, and he said, "Who is this? I have sought in vain for a man, and who is this?" And he ran, and when he saw her coming, he drew near and met her near the shore, and said, "Is it you, my friend?" And she said, "It is I," and he said, "Where do you live; I have not seen you?" And she said, "I live here." And he said, "Give me some fish," and she gave him one bag full, and he came rather nearer and followed her, and when he had finished one bag, he said, "Give me more, and if not, I will eat your sons," and she gave him another bag; and he came near the place where her two sons were; and they had made a crosstick, and she had taken the midrib of the sago palm leaf, and made it like a fish bone, and had put it into the net, in the place where the water flows forth from the rock. As the woman

drew near the place she drew forth the rib, and he said, "Give me that fish," and she said, "It is my sons' food," and he said, "Give it to me," and she said, "There is only one fish, and I want it very much for my two sons," and he said, "Give it to me," and she said, "I will put it into your mouth," and when he opened his mouth wide, she thrust the "midrib" down his throat, and sang a song, and it stuck in his throat, and so it was that he cried out, "My sister, I am dying," and her two sons came upon him suddenly, and shot him, and he died. And they three dwelt in peace. And the two sons used to go shooting fish, and their mother said to them: "When you are fishing, don't go far away, lest that evil thing see you." And they went and climbed a tree, and shouted out, "Ulaka! Ulaka!" And he heard afar off and ran, and as he ran, his tail struck the trees, and it broke them off short; and they two kept quiet, and when they saw him they were afraid, and he went away; then they climbed down. And one day they made many spears, and climbed into another tree and called out again "Ulaka! Ulaka!" And he ran, and they kept quiet, and he came and found some coconuts, and he ate them, and his countenance was very terrible, and when he had eaten he lay down; and when they saw that he was gorged, they came down and speared him. And they had put spears ready in the path, and as he fled, one on the one side of the road, and the other on the other side stood ready, and he turned to one to gore him, and the other speared him, then he turned again to that one, and the other speared him, and they kept on doing this till they reached the beach, and he died there.

NOTES ON SOME ANCIENT CHILIAN SKULLS, AND OTHER REMAINS.

By R. E. LATCHAM, Local Correspondent of the Anthropological Institute for Chile.

[WITH PLATES XV—XVI.]

IN his *Journal of the Voyage of the "Beagle,"* Darwin briefly describes the terrace formation of the district round Coquimbo Bay. Being located in the neighbourhood during the past few years, I thought it a favourable opportunity of making a more detailed study of the district than could be attempted in a few days' stay. The results of this study, geological and otherwise, I hope to publish shortly.

Meanwhile some of the results may be of interest to anthropological students and may help to throw a light upon the disputed question of the aboriginal inhabitants of this part of the continent.

One of the first things that attracted my attention was the frequent recurrence of irregular shaped mounds along the terrace edges, or ancient high-water marks. At first I supposed that these were piles of drifted sand, such as are in the course of formation along the actual coast line, but a closer examination showed that, while in many cases this was so, others were formed almost entirely of shells. It then occurred to me that these might owe their origin to human agency, and have been formed in the same manner as the shell mounds of the Baltic and other coasts. In such a case they would probably contain other remains, perhaps even human relics.

After a careful search, I found my surmise correct. Embedded among the shells and sand, were the bones of numerous animals and birds, some of which are not now found in this district. Occasionally I came upon instruments of stone, shell, or bone, also fragments of pottery, and, in several cases, portions of human skeletons, but in such a weather-worn, broken condition that I could not form an opinion respecting the race they represented. The skulls invariably crumbled away on touch, and even the teeth were so brittle that they would seldom stand the least pressure. This was doubtless owing to the porous nature of the soil, and the action of the moisture and acids. Only on one occasion did I obtain a skull in such condition as would render even a superficial study possible, and then only after carefully piecing and cementing the different fragments.

Not far from Coquimbo, on the upper level of the terrace series, are a number of quarries, from which a porous calcareous stone, much used for filters and building purposes, is obtained. By accident I heard that human remains were occasionally found there by the workmen. I repaired to the spot, and on

questioning the men, they admitted that they did, from time to time, come across such remains in the deposit immediately above the stone, and that they were generally in a good state of preservation. They invariably buried them again under the increasing piles of *débris*.

Having obtained this information, I set methodically to work on a portion of the ground entirely undisturbed. After three days' work I had the good fortune to find an almost entire male skeleton, in so good a state of preservation, and so little weathered, that it seemed to have been interred only a few years since.

On a subsequent occasion I was able to recover three other partial skeletons, all of them wanting their lower extremities. This was caused by a curious coincidence. The three interments had been made in a row, the axis of which ran from north to south. The space between each separate grave was about 3 feet, the heads all pointing in the direction of the rising sun. On uncovering the rock for a new quarry, the workmen had run their base-line exactly through the centre of the line of graves, cutting the skeletons in two, and carrying off in the rubbish the lower extremities, leaving intact the upper portions.

At first I thought that this was a burial place of recent date, and might be referred to one of the numerous skirmishes that took place in the neighbourhood during the revolutions of 1851 and 1859. But the testimony of the owners of the quarries, a closer study of the remains themselves, and an examination of the soil from which they were taken, convinced me that they were of considerable antiquity. This probability was strengthened by the number of stone objects found buried with the remains, some of them showing no small degree of skill in their manufacture.

A few days later I was lucky enough to come across another grave, containing in this case a group of three skeletons, an adult female, and two children, one quite an infant; also several interesting stone objects, among others two mullers of a peculiar pattern; a square stone, evidently used as a mortar, and some stone ornaments (Plate XVI).

A close examination of the ground satisfied me that it had not been disturbed for hundreds, perhaps for thousands, of years.

The remains I have mentioned were found at an average depth of 4 feet, 9 inches, and the result of my observations inclines me to the belief that, since the date of their burial, the whole level has been under the sea, and has afterwards been upheaved; the present height above the sea-level being over two hundred feet.

My reasons for this conclusion are as follows:—The skeletons are found in all instances in a layer of black deposit mixed with shells, which lies immediately upon the calcareous stone (composed, by the way, of minute particles of sand, broken shells, and fine fragments of stone, compressed into a solid mass). This black soil is still deposited in the southern part of Coquimbo Bay, where there is little current, and is quite distinct from the other deposits of the bay. The shells most abundant in it are: *concholepas*, *isurella*, *chitonæ*, *patella*, and *lapas*.

Above this black deposit there is a layer of calcareous compound of a yellowish-white colour, from 14 to 16 inches in thickness. This produces a very good quick-lime, and has led to the establishment of limekilns in the neighbourhood. On the top of this again is a bed of sand, with a light topping of gravelly mould. This, too, is full of shells.

Here then we have three layers of different colours and conditions. On removing the skeletons, I was most particular to notice in each case if these three layers were intact, finding that in every instance they were so; a clear proof that the burials had taken place before the deposition of the upper two layers; as in a contrary case, all three would have become mixed, on refilling the excavations.

I have been able to form no estimate as to the probable date of these burials, as the whole country shows such multiple signs of a vast series of submersions and upheavals that speculation would be vain.

The remains mentioned were so encrusted with the black deposit spoken of, that it was only with great difficulty I could remove it. All these remains have suffered remarkably little from weathering, and in most cases have lost little of their organic substances, being in these respects quite the reverse to those found in the sand-hills and shell mounds. This is doubtless owing to the tight packing and extremely fine nature of the deposit in which they were embedded, which is almost impervious to filtering. As an example of this, I subsequently noticed that in uncovered parts, after three days' heavy rain, the moisture had only penetrated to the depth of two or three inches, and that in the parts where it had been most upturned and so become loosened.

PARTICULAR DESCRIPTION OF THE SKELETONS.

Skull A (Plate XV.)—This skull is of medium capacity (mesocephalic), 1450 c.c. It is also mesozygous, mesognathous and mesaticephalic. Compared with the others of the series, it would seem to denote a cross with a race having different characteristics.

The sutures are open and simple; there is a small wormian bone in the lambdoidal suture near the right asterion.

The frontal is well developed, though the forehead is narrow in the superorbital region. The glabella and the superciliary ridges are not noticeable, forming one smooth contour; but the frontal eminences are prominent, giving a high appearance to the forehead. The general aspect of the face is one of flatness, and presents characteristics that have not before come under my notice. The nasal notch is completely wanting, a fact which probably accounts for the high naso-malar index. The nasal bones continue in a line with the forehead, while the biacrylic breadth is only 19 mm.; the dacryons being only slightly behind the external surface of the bi-nasal suture. This makes the outer edge of the orbits appear to recede, and gives an internal bi-orbital arc of 98 mm., while the chord is only 88 mm., infusing a prosopic element (111.3) to what is essentially a platyopic face.

The orbits themselves are rectangular and mesoseme, the superorbital notches pronounced; as is the case with all the foramina.

The maxillaries are short, broad, and remarkable for the very slight concavities below the malars. This helps to give the face its appearance of flatness. The *apertura pyriformis* is extremely narrow, and the nose highly leptorhine (39.2). The distance from the nasal spine to the alveolar process is very short; the palate is parabolic, with a staphylinic index of 95.8. This again is a point which has not before come under my notice, especially in Chilean skulls, whether Indian or otherwise. The internal palatine breadth, 46 mm., is much above the average, while the internal length, 48 mm., is less than customary.

The teeth, which are all present, are worn down in a remarkable way; far more so than I have ever seen before, even among the lowest savages (Fuegians and Ocas). In this skull especially, they barely protrude—incisors, canines and molars alike—four millimetres from the alveolar processes, and are quite separate *inter se*; the spaces between the molars being about 1 mm. and between the incisors about 2 mm. The superior molars especially are worn to a sharp exterior edge, being for the most part in a healthy condition, but in a few instances carious.

The mandible is strong and the chin square. There are indications that the muscular attachments have been extremely powerful. The inclination of the ascending ramus—narrow in all the skulls of the series—is about 105°.

Viewed in *norma lateralis*, one notices a flattening of the roof, beginning slightly before the bregma, and continuing for 60 mm. along the sagittal suture; on either side of which there is a slight concavity. The squamose suture is almost horizontal, and is very low, rising in no part more than 30 mm. above the *zygomata*. These latter, and also the malars, are massive, though not so solid as in skulls B and D. The temporal crest is not visible, but the post-zygomatic is very prominent. The parietal eminences are conspicuous, and curiously enough both are seriously damaged. On one side there is a star-shaped fracture which extends in every direction to the sutures, and was possibly the cause of death; although it may have been post-mortem. On the other side there is a deep indentation, 25 mm. in length and 5 mm. in depth, but the bone is not fractured or perforated, and it may have been caused in youth, while the bone was still in a plastic condition.

The skull rests on the occipital condyles, which are full and massive; the mastoids being only slightly developed, but the digastric grooves are wide and deep.

On the whole this skull is the best developed of the series, the face being weak, but denoting a degree of intelligence wanting in the others. The frontal region is extremely full in the spheno-frontal portion, bulging along the whole temporal crest. The roof of the skull is flattened, as is also the posterior surface, between the parietal eminences, rounding off in the occipital region.

Skull B (Plate XV.)—This skull is of a far ruder type than A, with a much smaller cranial capacity (1360 c.c.) It is also more dolichocephalic and more hypsicephalic. The bones are strong and massive, and the sutures very simple.

In *norma verticalis* it is ovoid in form, phænozygous in a high degree, and markedly prognathous, especially in the subnasal region. The parietal eminences are prominent, as are also the frontal; these latter being fused, which cause the forehead to bulge somewhat in the centre. The strongly marked superciliary ridges are distinctly discernible from above.

The greatest breadth is at the parietal protuberances, the skull sloping gradually from these points to the mastoids. The sides are very much flattened, presenting two surfaces; one anterior to, and the other posterior to and below, the parietal eminences.

In *norma lateralis* the great prognathism and the massive nature of the jaws and malars immediately attract attention. The forehead is receding, and the whole sagittal curve, from the metopic point to the inion, forms a single elliptic arc, without any flattening at the bregma, or at the post-bregmatic portion of the skull.

The *zygomata* are strong and the post-zygomatic ridges distinct, with indications of remarkably developed muscular attachments. The temporal crest is also prominent but very irregular in outline, rising obliquely to a point vertically above the *meatus auditorius*, whence it falls to the parietal eminence. The mastoids are insignificant, but the mastoid foramina are unusually well marked; as are all the foramina of this series.

The digastric grooves are deep and broad, and the occipito-mastoidal sutures form parallel grooves of considerable size. The occipital condyles are slight, but pointed and projecting.

The palate is elliptical in shape, with a staphylinic index of 80·1.

In *norma facialis*, what strikes one at once is the negro type of the face, with its massive jaws, prominent malars, and overhanging glabella and superciliary ridges.

The face is mesopic and leptoprosopic, but has a broad appearance owing to the fulness of the malars.

The bidacryc distance is rather more than is usual in American skulls. The nasal bones are entirely different in formation to those in A; the bridge being depressed, but the lower part of these bones much wider than at the nasion. The *apertura pyriformis*, instead of presenting sharp angles, is rounded at the corners and slightly truncated; the nasal spine is prominent.

The orbits are squarish, and the bony rim massive, and, what is peculiar, have two superorbital notches.

There is considerable facial and sub-nasal prognathism, the upper jaw projecting greatly. Most of the teeth are wanting; their loss being post-mortem. The alveolar processes show that they were protruding. The few molars left are much worn down, but not to the same degree as in A.

The lower jaw is strong and heavy; the chin square and full, fairly high symphysis, and moderately deep sigmoid notch. The thickness of this mandible is unusual, being 18 mm., both at the point of the chin and at the second molar. The angle of the narrow ascending ramus is slightly everted.

The occipital bone is small but prominent, and very massive at the inion; the thickness at this point being 13 mm. The asterions are well inside the occipital plane, both the mastoids and the squamæ being visible in *norma occipitalis*.

The left facial portion of the skull has been burnt; the zygoma and coronoid being completely carbonized.

The frontal is deeply scarred on both sides, but whether this is the result of wounds, or a pathological condition, I have not been able to decide. The scars, of which there are several, are from two to six cm. long and about one mm. in depth; one of them is bifurcated. Possibly they may only indicate a constricted superorbital nervous system, such as occurs in some South African races; but similar cases have not before come under my notice in South American crania.

Skull C.—The most conspicuous feature of this skull is its diminutive size. Its capacity is only 1080 c.c. (measured approximately with No. 8 shot). I say approximately, as the whole left temporal bone is wanting, and to measure the cubic contents I had to substitute one of wax.

In general appearance this skull resembles A, the flatness of the face being due to the same reasons, that is, to the continuity of the naso-frontal line, the fulness of the maxillaries and the prominence of the canine alveolars, thus flattening the whole anterior part of the alveolar process. The face does not look as broad as it otherwise would, owing to the want of the left zygoma; the right being very salient. Its general conditions are: slightly microseme, leptorhine, very platyopic, and leptoprosopic.

The forehead is narrow and low, receding abruptly from the metopic point, but is full in the spheno-frontal region as in A. The infra-orbital suture is plainly marked in this and in other skulls of the series.

The orbits are rectangular, and here again, as in B, the double superorbital notch is seen. The bones of the nose are straight and narrow, and the sub-nasal portion of the face extremely short and prognathous.

Seen from above, the skull is elliptic, and phænozygous in a high degree, the sutures open and simple.

This skull, like B, is scored in the frontal region, but it is difficult to say whether this is accidental or pathological.

In *norma lateralis* it presents some features worthy of note. The bulging of the lower portions of the parietals and of the squamose portions of the temporals is very pronounced; as is also the arching of the *zygomata*. The temporal crest is not noticeable except in the frontal. The upper portion of the coronal suture is depressed, which causes a corresponding bulging, anterior and posterior to the bregma. The frontal also bulges over the central line; but flattens away over each orbit. The parietal eminences cannot precisely be designated, owing to the rounding curves of this part. Different from the other skulls, the maximum breadth is not found in the bi-parietal diameter, but in the temporal region, 20 mm. below the squamose edge.

The skull is not symmetrical, one parietal being higher than the other, while

the right side of the occipital protrudes 10 mm. more than the left. Below the inion there are two deep impressions, where the recto-major muscles were inserted. The mastoids are small and pointed, the digastric grooves very wide, and the condyles insignificant. The palate is U-shaped, long and narrow; the teeth worn even more than in A, forming a sharp cutting edge on the outside, and worn down to the alveolars on the inside. The lower jaw is wanting, but must have been narrow and pointed.

This skull is the most chamaecephalic of the whole series, although it is well within the limits of orthocephaly, with an index of 71·2.

As I have already mentioned, the skeleton to which this skull belonged was found buried together with the skeletons of two children, one of an infant, and the other evidently not more than four years old. But these bones were in such a fragmentary condition that it was impossible to take any measurements, or even to make any detailed study.

Skull D (Plate XV).—On examining this skull, the theory of the American anthropologists, as to the probability of the primitive inhabitants of this continent having been of the Eskimo type, immediately occurred to me. Here we have many of its peculiarities reproduced, although in some cases slightly modified. The Fuegians, also, if one allows for distance and altered circumstances, are in many respects very similar.

In this skull we have the dolichocephaly (75·68), the marked scaphoid character without any sign of synostosis, the infra-orbital suture, the massive nature of the body of the mandible, the wide palate and worn teeth, the flat face with its prominent malars, the considerable sub-nasal prognathism, the prominence of the chin, the relatively narrow *apertura pyriformis* of the nose, and the small size of the mastoids and condyles; all in accordance with the cranial characteristics of the Eskimo.

The sutures are all well defined, but simple, the bones thick and very heavy.

All the protuberances and *foramina* are strongly marked.

In *norma verticalis* this skull has the shape of a truncated cone with a rounded base. It is slightly phænozygous and highly prognathous. The parietal eminences are very prominent and the frontal protuberances well indicated. As in C there is a slight depression at the bregma.

In *norma occipitalis* the skull is pentagonal in outline; the roof being sharply pointed and the sides vertical. The mastoids are larger and the digastric grooves shallower than in any of the other skulls. The occipital and the posterior portions of the parietal and temporal bones are asymmetrical, there being a considerable bulging on the left side of the lambda, especially in the vicinity of the mastoid. The skull is acrocephalic, the breadth-height index being 102·9.

In *norma lateralis* the forehead is seen to be full and rather high. The glabella and superciliary ridges are insignificant. The sagittal curve rises to a point at the bregma, rounding off to the lambda; there being a faint post-bregmatic concavity.

Owing to the protrusion of the temporal *squammæ*, and the flattening of the zygomata, the temporal *fossæ* are better filled than in any other of these skulls, although the sphenoids are deeply grooved.

Viewed in this norma, three planes present themselves. One falling from the sagittal suture to the temporal crest; the second from the temporal crest to the zygomata; and the third including the lower posterior part of the parietals; behind the line running from the *meatus auditorius* to the parietal eminences, which latter are strongly marked. There is also a considerable flattening from the obelion to theinion.

In *norma facialis* the fulness of the maxillaries, spoken of in the other skulls, is still a prominent feature. The face is leptoprosopic and verges on platyopy, with a naso-malar index of 108·6.

A point worthy of note is that in all the male skulls of the series the orbital measurements are identical.

The nasal fossæ are of the true pyriform shape, and the index places the skull in the mesorhine group. As I have remarked in the case of other skulls of the series, the infra-orbital suture is very apparent, and seems to persist till old age without obliteration. The bidacryc distance is small. The frontal is very narrow, allowing the whole side of the skull to the parietal eminences to be seen. The palate is parabolic and unusually high (17 mm. from the centre of the palatine torus to the alveolar plane). The teeth are small, rather worn down, but all sound. The chin is prominent, but the sigmoid notch is not very deep owing to the vertical setting of the inferior incisors; those of the upper jaw meeting them obliquely, thus causing great sub-nasal prognathism.

The mandible, though strong, is not so massive as in A and B; the ascending ramus being small and the condyles slight.

The molars present a considerable inward obliquity, owing to which the exterior edge is much more worn than the interior. The *apophysis genii* are very protuberant, with the digastric notch well formed.

The *foramen magnum* is pyriform and asymmetric; the condyles insignificant, and the jugular apophysis extremely small. The rugged surface of the lower portion of the occipital denotes that the neck muscles must have been very powerful.

Skull E.—This skull is very similar in general outline to D, having many points in common with the rest of the series, and also some special characteristics of its own.

In respect to the age of the individual, it belonged undoubtedly to the oldest member of the group. The sutures, especially the coronal, are partially synostosed. The forehead is low but not retreating, and the parietals rise to a peak about 4 centimetres behind the bregma. The skull is scaphoid, but not so much as D, dolichocephalic (71·6) and phænozygous, with a marked sub-nasal prognathism.

It is not in such perfect condition as the others of the series, the right parietal being badly damaged.

Viewed in *norma verticalis* it is ovoid in form, with a capsular occiput. All the eminences are prominent, the glabella especially being strongly marked.

In *norma lateralis* the development of the temporal crest at once fixes the attention. It is so strongly marked in the frontal region as to cause a depression immediately above it. In the parietals this ridge is duplicated, leaving a slight but well-marked furrow between the two branches. The flattened planes noticed in D are here reproduced, but the occiput is much more protruding.

In *norma facialis*, the flat features, the narrow forehead, the continuous fronto-nasal line, the prominent canines and the double superorbital notch are all in accordance with others of the same group, although the wider malar diameter and the broad short nose (nasal index 56.5) indicate individual variation.

Although the majority of the sutures are obliterated, the infra-orbital suture is still distinctly marked. Another significant fact is that the orbital measurements are exactly identical with those of the other male skulls of the series. Is this a racial distinction or a mere coincidence?

The malar orifice is double on both sides, there being a space of about 10 millimetres between the ducts.

The general characters of the face are chamaeprosopic, platyopic, mesosemic, and platyrrhine.

The lower mandible is broken in two, and is much weathered. All the incisors are present, but are worn down to the alveolar borders, while the molars, with one exception, were lost previous to death. The ascending ramus forms a much more obtuse angle than in any of the other mandibles, undoubtedly owing to the age of the individual. The bicondylic breadth is unusually great (128 mm. exterior measurement).

The palate is U-shaped and elongated, and the upper teeth all wanting with the exception of three incisors, worn down to the alveolar. The *foramen magnum* is asymmetrical and rhomboidal in form, and the condyles larger than usual.

Skull No. 1.—From shell mounds. This skull is only fragmentary but in general outline quite different from those already described. From its size it would appear to be that of a child, and the thinness of the bones seems to point to the same deduction. It is mesaticephalic in form, with an index of 80.0, with narrow sloping forehead, and gently rounded roof. The parietal protuberances are barely noticeable, and the greatest diameter is found below and slightly to the front of them.

As only the frontal, parietals and a portion of the occipital are present it is not easy to make a comparison, but I should have no hesitation in saying that it belonged to a type distinct from the series lettered alphabetically.

Measurement.	A	B	C	D	E	No. 1	Observations.
Sex	male	male	fem.	male	male	male	?
Age	30-40	35	30	30	60		Approximate.
<i>Diameters.</i>	mm.	mm.	mm.	mm.	mm.	mm.	
Antero-posterior	176	177	167	181	180	164	Maximum.
Transverse	141	135	128	137	129	131	
Frontal, maximum	116	112	102	109	112	102	
„ minimum	89	95	86	94	91	86	
Height	137	143	119	141	134	—	Basi-bregmatic.
Basi-nasal	96	100	91	98	98	—	
Basi-alveolar	87	98	97	95	99	—	
Foramen magnum	38	34	33	32	37	—	Length.
„ „	34	30	26	28	28	—	Breadth.
Bi-orbital	100	107	96	101	104	—	External.
„	88	96	88	93	96	—	Internal.
Orbital length	40	40	37	40	40	—	All the male skulls are equal in these diameters.
„ breadth ..	35	35	31	35	35	—	
Bi-dacryc	19	23	19	21	22	—	
Nasal length	51	50	47	49	46	—	
„ breadth	20	25	22	24	26	—	
Palatal length	48	53	48	53	59	—	} Internal.
„ breadth	46	43	40	42	43	—	
Bi-jugal	107	116	108	110	114	—	
Bi-zygomatic	126	130	129	127	132	—	
Ophryo-alveolar	76	81	77	80	73	—	
Nasi-alveolar	66	72	63	68	64	—	
<i>Curves.</i>							
Frontal	126	128	122	130	126	113	
Parietal	114	134	110	124	138	108	

Measurement.	A	B	C	D	E	No. 1	Observations.
Sex	male	male	fem.	male	male	male	?
Age	30-40	35	30	30	60		Approximate.
	mm.	mm.	mm.	mm.	mm.	mm.	
Occipital ...	134	112	110	120	111	—	To opisthion.
Total sagittal ...	470	474	433	472	473	—	Including basi-nasal line over bregma.
Supra-auricular ...	325	320	290	325	316	—	
Horizontal	510	505	480	499	505	—	
Naso-malar ...	98	105	93	101	102	—	
<i>Indices.</i>							
Cephalic	79.2	76.2	76.6	75.6	71.6	79.8	
Length, height ...	77.0	80.2	71.2	77.9	74.4	—	These three indices give the true proportions.
Breadth „ ...	102.9	105.9	92.9	102.9	103.8	—	
Mixed „ ...	89.9	93.0	82.0	90.4	89.1	—	
Orbital	87.5	87.5	83.8	87.5	87.5	—	
Nasal	39.2	50.0	46.8	48.9	56.5	—	
Palatinal	95.8	80.1	83.3	79.2	72.9	—	Staphylinic.
Nasi-alveolar ...	55.8	55.4	48.8	53.5	48.4	—	Kollmann's.
Ophryo-alveolar ...	60.3	62.3	59.7	63.0	55.3	—	Broca's facial index.
Stephanic	77.5	84.8	79.4	86.2	81.2	84.3	
Foramen magnum....	90.0	88.2	78.8	87.5	75.6	—	
Naso-malar ...	111.3	109.0	105.6	108.6	106.2	—	
<i>Mandibles.</i>							
Bi-condyloid diam.	111	120	—	106	128	—	External.
Ramus, height ...	44	50	—	45	40	—	
„ breadth ...	31	34	—	32	35	—	
Symphysial height ...	30	36	—	32	28	—	
Molar height ...	26	31	—	28	—	—	{ A. 1st molar. B. 2nd „ D. 2nd
Coronoid height ...	56	56	—	57	59	—	

Measurement.	A	B	C	D	E	No. 1	Observations.
Sex	male	male	fem.	male	male	male	?
Age....	30-40	35	30	30	60		Approximate.
	mm.	mm.	mm.	mm.	mm.	mm.	
Condylloid height ...	59	69	—	58	58	—	
Bi-gonial curve	181	200	—	191	206	—	
Bi-gonial breadth....	97	96	—	90	97	—	
Ophryo-mental height ...	—	133	—	128	114	—	
Naso-mental „	—	116	—	116	—	—	
Bi-stephanic length	—	109	101	108	—	—	
Spino-alveolar height	—	22	18	20	—	—	
	c.c.	c.c.	c.c.	c.c.	c.c.		
Capacity	1450	1360	1080	1330	1295	—	The capacity of skull C is approximate.
<i>Other bones.</i>							
Radius	23·0	23·5	21·3	24·1	22·6	—	Where possible the bones of the right side are those of which the measurements are given.
Ulna	27·0	26·5	25·2	27·3	26·0	—	
Humerus	32·0	33·6	28·5	33·9	30·7	—	
Tibia	32·7	—	31·5	—	—	—	
Femur	44·7	—	41·3	—	—	—	
Clavicle	13·5	13·7	12·4	13·9	13·1	—	

Other Objects Found.

Two mullers of peculiar form, shaped for the hand to grasp, and indicating considerable use. (Plate XVI, Figs. 1 and 2.)

One flat stone with scalloped sides, much worn in the centre and evidently used as a mortar. (Plate XVI, Fig. 3.)

A flat thin stone, probably used as an amulet or ornament. (Plate XVI, Fig. 4.) This stone is highly polished and is of a kind of yellowish-white marble. It has been perforated at one end by three small holes, which, by the constant friction of the suspending cord, have become greatly elongated; so much so that one has been cut right out and a second bored beneath it. It indicates long use and may possibly have been a family relic. This stone was found with the mullers and mortar, buried with the female skeleton.

A smooth thin axe-head, highly polished, and broken at its upper extremity. (Plate XVI, Fig. 5.)

A flint spear-head (Plate XVI, Fig. 8), roughly chipped, both extremities broken.

A polished axe-head. (Plate XVI, Fig. 7.) This has a slight groove round the narrow end, evidently where a cord has been used to fasten it to a haft.

A broken flint instrument, rudely chipped, which may have been a leaf-shaped spear-head. (Plate XVI, Fig. 6.)

A broken stone ring, much worn, probably used as a weight for nets. (Plate XVI, Fig. 9.)

A stone ball, probably used for the same purpose. (Plate XVI, Fig. 10.)

Several fragments of coarse pottery were also found. These were made of black clay mixed with fine white sand. They bear no mark of scoring or decoration, and are of the rudest description.

GENERAL OBSERVATIONS.

It will be as well here to recapitulate the distinctive characteristics of this series of skulls. These consist of the remarkable thickness and weight of the skulls, especially in the malar and occipital regions; the general flatness of the face; the continuous fronto-nasal line; the coincidence of the orbital measurements; the great width of the palate and worn condition of the teeth; the flattened surfaces of the walls and roof of the skulls; the tendency to scaphocephaly; the persistent infra-orbital suture; the double superorbital notch, and the prominence of the canines.

Their general dimensions place them among the sub-dolichocephalic group of races, their cephalic index being just a trifle over 76, although one (A) reaches 79.2.

The general type is quite distinct (even to a casual observer) from that of any other Chilean race which I have examined, including that of the natives of the time of the Spanish conquest.

In Chilean and Araucanian skulls the greatest transverse diameter is, in the great majority of cases, found immediately above the squamose edges of the temporals, while the parietal protuberances are rounded and not very prominent. With the skulls in question, on the other hand, the greatest width occurs exactly between the parietal prominences, while they narrow away considerably towards the temporals.

The roof of the skull is also far less symmetrical than in the Chilean and Araucanian, owing to the flattening of the parietals, both above and below the temporal crest, which give them a scaphocephalic tendency.

The prognathism of these skulls is very marked, especially sub-nasally. The angle ranges from 71° to 72° , about that of the Eskimo.

The frontal is high but narrow, quite distinct from the Araucanian skulls, in which it is broad but depressed. The frontal diameter (minimum) is less in this race than in any other, the mean diameter of the five skulls being 91 mm.

The general appearance of the face is one of extreme flatness. This is caused principally by the continuity of the fronto-nasal line (there being no notch below the glabella, the nose continuing in a line with the forehead) and the fulness of the malars.

The orbital index is high, and in four of the five skulls under study was exactly the same. The nasal index is low, while the zygomatic diameter is less than that of any other Indian race found in Chile.

Another peculiarity found in all the skulls is the great palato-maxillary diameter, the average (external) being 66 mm. The teeth in all of them are worn down in a most extraordinary way, not only the molars but even the incisors. In two of the skulls these latter only protrude from the alveolar processes about 4 or 5 mm., and are quite separated one from the other, the space between each being from 2 to 3 mm. Teeth and molars alike are worn to a sharp exterior edge and present a concave surface.

A point of especial importance is the persistent infra-orbital suture, which continues even in old age, as evidenced by skull E. This together with the double superorbital notch is a distinctive feature in all the skulls of the series, and is common among the Fuegians and Eskimo.

The capacity of the skulls is very low, giving an average of only 1,305 c.c. One of them, a female, only reached 1,080 c.c., although it does not show any signs of being abnormal.

The bones of the body seem to indicate that this race was of low stature, and slightly built. The average length of radius of the four male skeletons is only 23.3 cm., and, calculating this bone by Humphrey's table at 14.15 per cent. of the total length of the skeleton, would give an average height of 165.7 cm. or 5 feet 4½ inches more or less. The female skeleton, on the other hand, only measured a little over 150 cm. or 4 feet 11½ inches.

The state of civilization to which this race had attained seems to have been very low. They were evidently in the transition stone age, as the instruments found are some rudely chipped and some fairly polished. No sign of metal was found, but fragments of rude pottery, without any attempt at decoration, were numerous.

It is probable that their principal food was shellfish; but they also ground roots or berries, as is shown from the worn state of the rude stone mortar. They also had some means of catching or killing wild-fowl, as the bones of such are abundant.

Their mode of burial would seem to indicate that the sun had an important place in their religious ideas, and a belief in a future state is suggested by their burying arms and household utensils with their dead. It is also probable that they indulged in personal decoration, as the pierced stone (Plate XVI, Fig. 4), and a number of perforated shells of small size, have evidently been used as ornaments.

Who were these people? Whence did they come? Whither have they gone? These are questions that with the scanty data set forth I cannot venture to answer; but I would call the attention of anthropologists to several points which, while

common among the Fuegians and Eskimo, are persistent in the remains here presented.

Before making a more detailed comparison of these races it would be as well to mention that most text-books rather exaggerate the peculiarities of the Eskimo. Thus it is generally stated that they are extremely dolichocephalic (index from 71 to 72). We shall see by tables here given that the race is more probably sub-dolichocephalic with an index of more than 75, although there are many individuals who fall much below this.

The same remarks apply to the nasal index. While still very leptorhine, they are not so to such a degree as is commonly supposed, the average index being probably above 44.

Again, we are frequently informed that they have the yellow complexion of the Asiatic. This may be so where some intermixture has taken place with Mongolic tribes, but as a racial characteristic it is doubtful, as many well-known writers, who have made personal observations, decide otherwise. Hayes describes them as greyish brown; Holm and Pinart say they are of a light bronze colour; and John Murdoch speaks of their complexion as a dark brunette, often with a good deal of colour in the cheeks.

Cephalic Index.—I give here various lists of Eskimo skulls, indicating at the same time their provenance.

21 skulls from Greenland	...	..	71·7 (Broca)
14 " " "	...	..	71·3 (Davis).
614 " " "	...	...	76·8 (Deniker).
22 " " "	...	...	71·4 (Turner).
6 " " Hudson's Bay	...	...	75·1 (Davis).
35 " " " "	...	...	77·2 (Tocher).
5 " " Labrador	...	...	74·1 (Virchow).
27 " " "	...	...	77·0 (Deniker).
10 " " "	...	...	71·8 (Duckworth).
19 " " "	...	...	71·5 "
6 " " Alaska	...	...	75·3 (Davis).
? " " " "	...	...	74·8 (Deniker).
101 " " —	...	...	71·37 (Bessels).
Average of 880 skulls	...	...	76·1

It is probable that many of the skulls contained in this list have been quoted more than once by writers who have included the results of other studies in their own tables.

Comparing the average index of the 880 skulls with that of the five Chilian, we find a near resemblance (76·1—76·5).

Altitudinal Index.—Another peculiarity of the Eskimo is the great height of the skull. French anthropologists chiefly employ the length-height index to express this quality; the Germans prefer the breadth-height. There is much to be

said against both methods, and we agree with Broca that the mixed-height index is that which gives the best idea of this characteristic.

	Length-height.	Breadth-height.	Mixed-height.	
13 Eskimo	73·1	—	—	Broca.
5 Eskimo	74·0	103·0	88·5	Virchow.
5 Chilians	76·1	101·7	88·9	

These indices show the similarity of the two races in this respect, and also place them as a unique group at the head of the hypsiccephalic and acrocephalic peoples.

Frontal Measurements.—The proportions and shape of the frontal region in the two races are also very similar, as shown below.

Frontal Index :—

15 Eskimo (Broca) ...	94·1
5 Chilians ...	91·0

Stephanic Index :—

10 Eskimo (Cambridge Museum) ...	81·2
7 „ (Duckworth) ...	80·9
5 Chilians ...	81·8

Orbital Index.—The same resemblance occurs in this index :—

8 Eskimo (Duckworth) ...	87·5
10 „ (Cambridge Museum) ...	88·6
5 Chilians ...	87·5

Nasal Index.—Here we note a more considerable difference, the Eskimo being highly leptorhine and the Chilians mesorhine, although the index in one case was little more than 39.

14 Eskimo (Broca) ...	42·3
15 „ (Duckworth) ...	45·3
9 „ „ ...	44·0
10 „ (Cambridge Museum) ...	45·5
Average ...	44·2
5 Chilians ...	48·3

Facial Index.—To give a more exact idea of the facial proportions, we will append both Broca's and Kollmann's indices. Here we note a singular discrepancy. In the latter index we find that there is more or less coincidence between the two races, while in the former the difference is very marked.

Kollmann's Index :—

18 Eskimo (Duckworth)	...	...	...	51·8
10 „ (Cambridge Museum)	...	...	...	54·3
? „ (R. C. S.)	...	...	...	51·2
5 Chilians	...	...	...	52·4

Broca's Index :—

13 Eskimo (Broca)	...	...	...	73·4 ?
5 Chilians	...	...	...	60·1

It is difficult to say whence this difference arises, as neither the ophryo-alveolar length nor the bi-zygomatic breadth are given in Broca's list.

Naso-malar Index.—Very little difference is noted in this index; the slightly higher figure in the Chilians being due to the flattened nasal skeleton.

18 Eskimo (Duckworth)	...	...	...	107·0 (men).
8 „ „	...	...	...	106·1 (women).
10 „ (Cambridge Museum)	...	...	...	107·9
5 Chilians	...	...	...	108·1

The result of these comparisons shows that, although separated by the whole length of the continent, these two races have a very marked resemblance to each other. This is the more extraordinary when we refer to an article published by W. L. H. Duckworth and B. H. Pain in the *Journal of the Anthropological Institute*, vol. xxx, 1900, in which the special characteristics of the Eskimo skulls are given as follows :—

1. A tendency to scaphocephaly.
2. The persistency of the infra-orbital suture in *pars facialis*.
3. The asymmetry of the foramen magnum.
4. The peculiar wearing of the teeth.
5. The thickening of the body of the mandible.
6. The megasemic orbital aperture.
7. The flattened nasal skeleton.
8. The prominence of the chin.
9. The low nasal index.
10. The prominence of the malars.
11. The small mastoid processes.

Comparing these peculiarities with those of the Chilean skulls given at the beginning of the chapter, we find that they coincide in almost every detail.

Many writers have called attention to the affinities of the Eskimo with those tribes which people the coasts of the Magellan Straits; the Tehuelches, Onas, Analues, Yaghans, Pesheras, and others.

That these tribes have inhabited the southern portion of the continent since very remote times is proved by the remains found in various prehistoric sites.

Among others I may mention a series of prehistoric skulls sent by Dr. Moreno to the Anthropological School of Paris.

These skulls reproduce all the most notable characteristics of the Eskimo; the high narrow forehead, the flattened planes of the skull, the dolichocephalic and acrocephalic elements, the length of the face, the prominence of the malars, the degree of prognathism, the small bi-orbital distance, the large palate, and the peculiar wearing of the teeth.

All these peculiarities are also reproduced, as we have seen, in the Serena skulls.

Medina, in his *Aborigines of Chile*, also mentions several skulls to which he ascribes considerable antiquity, giving the following details.

	1.	2.	3.	4.
Provenance	—	—	Osorno.	Chonos Archip.
Cephalic index	75.9	76.4	74.7	69.4
Bi-malar diameter	—	111 mm.	114 mm.	125 mm.
Frontal minimum	89 mm.	97 mm.	99 "	98 "
Length-height index ...	72.4	72.4	76.9	75

These measurements, so far as they go, would seem to indicate that they might belong to the same race.

The same author also gives some measurements of a Fuegian skull. Cephalic index, 73; length, 178 mm.; breadth (parietal), 130 mm.; breadth (bi-temporal), 123 mm.; bi-malar diameter, 130 mm. (zygomatic?); frontal (minimum), 82 mm.

An ancient Tehuelche skull from the south of the province of Neuquen (Patagonia), now in my possession, gives similar measurements, but also differs in some particulars. Cephalic index, 74.7; length-height index, 73.7; breadth-height, 98.6; mixed-height, 86.1; orbital, 90.2; nasal, 55.5; ophryo-alveolar, 59.2; naso-alveolar, 52.6; stephanic, 85; capacity, 1,540 c.c.

This skull is very slightly prognathic, the glabella and superorbital ridges extraordinarily salient and massive, the nasal notch deep, and the bones of this organ both broad and prominent. The skull is slightly scaphocephalic, and presents the flattened planes mentioned as common in the Serena skulls; the mastoids are small, and the foramen magnum pyriform. The occipital torus, strongly marked, reaches from one asterion to the other. The double superorbital notch is apparent, but the infra-orbital suture is not noticeable; in fact all the sutures are more or less synostosed. Its general characters are—dolicho-hypsiacrocephalic, mesognathic, megaseme, platyrrhine, prosopic and slightly scaphocephalic.

From these details and comparisons it is seen that there exists a great general resemblance among the prehistoric races of the southern extremity of the continent, and that this resemblance extends to the races inhabiting the Magellan

Straits district, as well as to the Eskimo who inhabit the extreme north. At the same time we know of no other race who have any near affinities with this type.

Some writers, among them Quatrefages, contend that America was originally, and always has been, peopled by migrations from the Old World, presumably Asia, although some incline to Europe.

The two special races to which they are supposed to owe their origin are the Mongols, and the dolichocephalic type that inhabited Northern Europe during the Stone Age.

Let us briefly examine these two types to discover their points of contact.

The Mongols are brachycephalic, metriocephalic, mesorhine, megaseme, and mesognathic.

The Eskimo are dolichocephalic, hypsi- and acrocephalic in a high degree, very leptorhine, mesoseme, and prognathic. In all these points the two races differ radically. As regards the general shape of the face, stature, obliquity of the orbital axes they resemble each other, but there the likeness ceases.

The dolichocephalic races of Europe may be classed under two heads, the tall fair type of the north, and the short brunette of the south. With the latter we have nothing to do.

The former is known by many names—the Scandinavian, the Canstadt, the Frisian, the Row-grave, etc. It is still found in some parts of Sweden, in the Danish isles, and in certain Frisian districts.

This race was tall, dolichocephalic, extremely platycephalic, with a low retreating brow and narrow forehead, narrow prominent nose, enormous orbital cavities, heavily marked superorbital ridges, prognathism greater in the lower jaw than in the upper, and the occipital region highly developed. They had blue or grey eyes, abundant fair hair, and ample beards.

It is difficult to reconcile this description with that of the Eskimo, who are in almost every detail the direct contrary; being short, dark complexioned, and with very little hair on the face or body.

We must then either abandon the theory that these latter are not autochthonous, or seek new affinities for them among other races, prehistoric or otherwise, where the contrast will not be so marked; especially as the resemblance they bear to the Serena skulls would seem to indicate that, although the two branches must have been separated long ages ago, the racial type has remained, even under changed circumstances, remarkably persistent.

NOTE ON THREE SKULLS FROM MOCHA ISLAND.

Since writing the foregoing article I have received a communication from Dr. Vergara Flores, of Tocopilla, briefly describing three skulls—supposed to be very ancient—found in the island of Mocha. This island is situated close to the coast of Chile, in 38° 4' S. latitude. It was formerly considered by the Araucanos to be the resting-place of the souls of the dead in their voyage west.

The most notable characteristic of these skulls is the remarkable bi-zygomatic diameter (145·1 mm.) and the proportionately short ophryo-alveolar distance. This causes a very low facial index (53·2, Broca). This is a trait common to the Araucano Indians. In a list of measurements of 31 Araucano skulls, I found 11 with a facial index varying from 50 to 54.

The great palato-maxillary dimensions, and high staphylinic index, are also common features of the Araucanos and, in general, of the races inhabiting the southern extremity of the continent.

The frontal dimensions, and consequently the stephanic index, are also very similar in the two races; so, too, is the nasal index. The general form of the face, the very prominent glabella and superorbital ridges, again would seem to indicate that the two races had much in common; but here the likeness ceases.

The Araucano has a rounded skull, the Mochinos present plane surfaces with a decided tendency to scaphocephaly. The Araucano is only slightly phænozygous, the Mochinos extremely so; far more so than in any other race of which I have knowledge. The greatest transverse diameter is found in the temporal regions in the Araucano skulls, and in the parietal protuberances among the Mochinos.

So developed is the malar region in these latter that the bi-zygomatic diameter is greater by more than 5 mm. than the transverse diameter of the skull.

The sub-nasal prognathism in these skulls is also very great (67·3°), and the facial angle (Cloquet) 68·2°. The nasal spine is very developed, the bridge very sunken. The occipital region is also well developed, especially at the inion, there being a prominent occipital torus. The general characters of the skulls are: sub-dolichocephalic, hypsi-acrocephalic, extremely chamæprosopic, platyopic, phænozygous, megaseme, mesorhine, and highly prognathic.

In many points these skulls are similar to those described in the foregoing article; and it occurred to me that they might belong to a type formed by an intermixture of that ancient race with later comers, probably Araucanos.

The following is a list of the principal measurements, compared with those of these two races:—

Measurement.	Serena Skulls.	Mochinos.	Araucanos
Length (maximum)	176 mm.	180 mm.	177 mm.
Breadth ".....	134 "	140 "	141 "
Frontal ".....	110 "	118 "	118 "
" (minimum)	91 "	97·3 "	97 "
Height (basi bregm.)	135 "	138 "	135·6 "
Diameter, bi-zygomatic	129 "	145·1 "	134·4 "
" ophryo-alveolar	77·4 "	77·6 "	75·6 "

Measurement.	Serena Skulls.	Mochinos.	Araucanos.
Cephalic index	76·1	77·7	80·1
Length-height index	76·1	76·8	77·1
„ breadth „	101·7	98·3	96
Mixed „ „	88·4	87·5	86·5
Stephanic index	81·8	82·4	81·1
Frontal „	—	—	68·8
Facial „ (Broca)	60·1	53·2	56·9
Nasal „ ...	48·3	49·7	48·6
Orbital „	87·5	90	85·3
Palatino „	82·3	83·6	82·9
Prognathism, angle	—	67° 3'	73°
Facial angle (Cloquet)	—	68° 2'	—
Capacity	1,305 c.c.	1,387 c.c.	1,401 c.c.

It will be seen from this list that the principal indices are such as would result from such an intermixture, while the fact that these skulls possess many of the characteristics of each would seem to strengthen the same deduction.



Skull A.

Skull B.

Skull D.

FIG. 1.—NORMA FACIALIS.



Skull A.

Skull B.

Skull D.

FIG. 2.—NORMA LATERALIS.



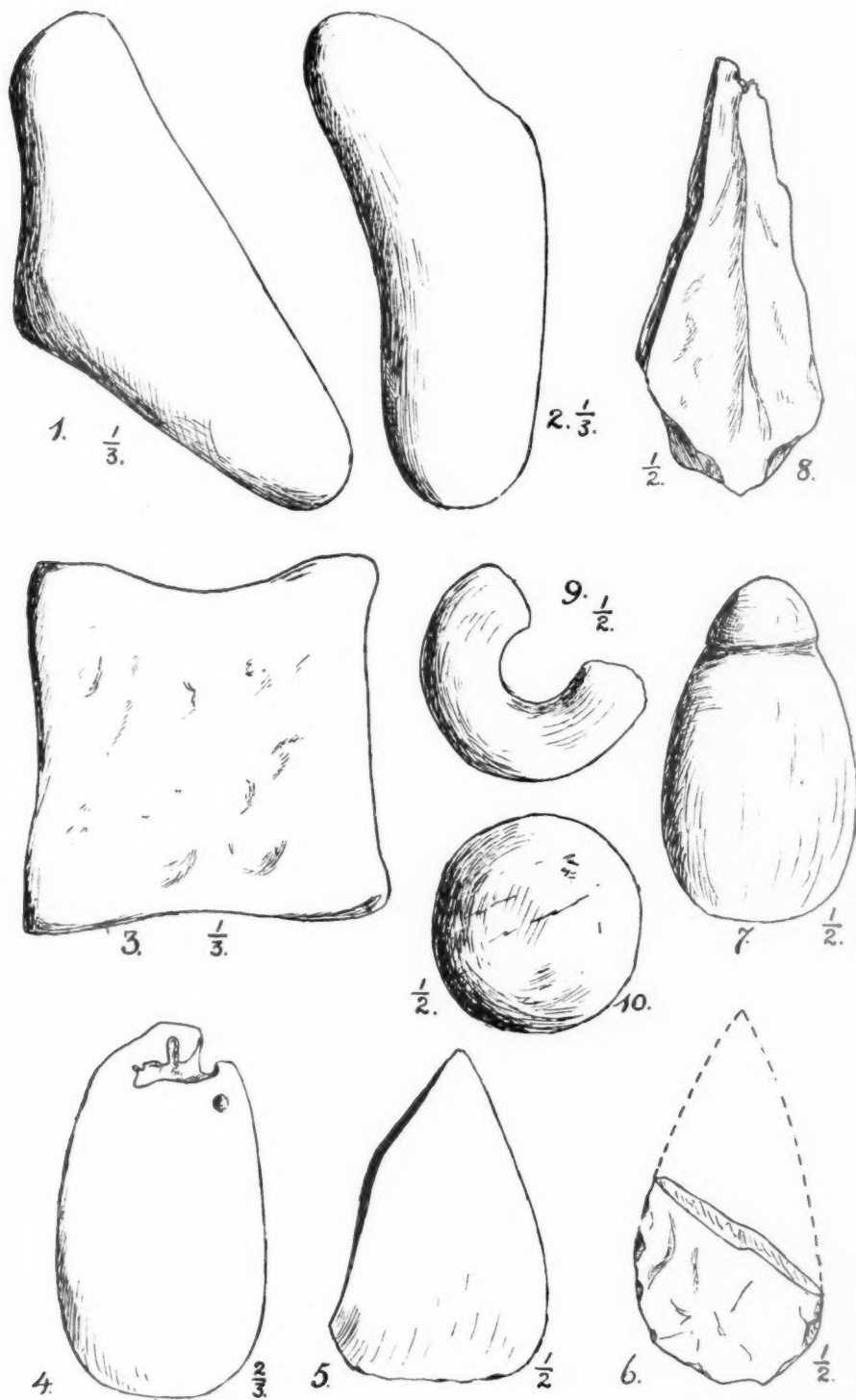
Skull A.

Skull B.

Skull D.

FIG. 3.—NORMA VERTICALIS.

NOTES ON SOME ANCIENT CHILIAN SKULLS AND OTHER REMAINS.



SOME ANCIENT CHILIAN SKULLS AND OTHER REMAINS.

FURTHER NOTES ON THE KIKUYU TRIBE OF BRITISH EAST AFRICA.

BY H. R. TATE.

[WITH PLATES XVII—XVIII.]

Painting and Tattooing.

IN preparation for a dance the Akikuyu unmarried youths smear their bodies with a kind of salt gypsum called *Munyu wa Karian Dusu*, which is obtained principally from a locality between Lakes Naivasha and Elmenteita. They also employ a white clay found on the slopes of Kenya called *Kirera*. This is moistened with a little water and smeared over the face, body and limbs. Wavy lines are then drawn perpendicularly on the latter with the finger which erases the pigment, the face being traced in fantastic lines as shown in the accompanying photograph (Pl. XVII, Fig. 4). Red clay is also smeared around the eyes to give the wearer a fierce look. *Mrututu*, or blue-stone, which is bought from Indian traders, has lately been adopted to rub around the eyes as is the custom of the Akamba. The use of pigments among the Akikuyu seems to be adopted solely for the purpose of increasing the striking appearance of the dancer and has no hidden significance. As young unmarried youths are looking out for their future wives at this time, a good deal depends upon the effect of their toilet at these dances, which are called *Rua*. It is at these dances that the *ndomi* or shoulder shield is worn, as shown by the accompanying photograph (Pl. XVII, Fig. 5). Both young men and women cut marks on their bodies before marriage; the latter also incise three-quarter circles between the eye and ear which are called *miokia*. Horizontal raised scars named *ndemwa* are made upon the chest and abdomen of young girls. This is supposed to improve the appearance of the owner. Young men have three or four horizontal raised scars cut across the loins for the same purpose. The *miokia* are cut by a professional doctor with a kind of wooden skewer, but the *ndemwa* are incised by some woman skilled at this work, who uses a *ruenji*, or kind of scalpel, with which the skin is pierced and prized up to form a raised scar.

Habitations.

The huts of the Akikuyu tribe are simplicity itself, being built of grass and withes, with stout stick-pillars inside to hold up the roof and form corners to the bedsteads, bark rope being used to lash the materials together. Circular huts about 16 feet in diameter are invariable, and hardly any variation except in size takes place

in their structure. Grain houses (*ikumbi*) are always built on piles and temporary dwellings are occasionally constructed in trees in time of war and are called *nguki*.

Young unmarried men sleep together in *thingira*, in which huts the goats and sheep are also penned at night. Unmarried girls also sleep by themselves. Married women have each their own separate hut which their husband is supposed to visit in turn. A male traveller sleeps in the *thingira*.

On the death of the owner his house is either destroyed or left to decay, but never re-occupied or re-entered. The owner is never buried inside his house, but is either thrown out or left inside for the hyenas to drag away. The members of one family to the third generation generally live in the same village, which is usually surrounded by a stout fence pierced by a stockaded doorway (*kihingo*), although this mode of surrounding their villages is gradually being abandoned by the Akikuyu, since the *Pax Britannica* has given them absolute immunity from the attacks of the Masai.

Villages are generally built on a hill both for purposes of circumspection and because, as the natives state, the valleys are colder than more elevated positions. In moving their villages the natives reconstruct new huts from the old material. The bed, the *zegi* or ledge for holding household property, and a few stools are the only furniture of the hut. The bed is fenced in with a sort of screen of twigs. One fire only is made in the centre of the hut, the smoke escaping through the thatch. Refuse from the house is thrown out on to an ash heap outside. Caves in hill sides are often used as shelters in time of war and for hiding goats and sheep. When the site for a new village has been chosen, the owner comes with all his property, accompanied by his wives, and pours on the ground an offering (*kithambio*) of gruel of *mtama*; the head wife is also allowed to pour out a little. The man then prays to Ngai, asking that a prosperous village may rise up on this site and that property, wives, and fruitful fields may be his while he lives here. Building is then commenced, which when finished is followed by the slaughter of a sheep. All the members of the village join in the feast. Wine is next made and drunk by all the male portion of the community and by the married women and a little is spilt in each new hut. Prior to moving from old quarters the head elder of the village sends a goat to be herded by a neighbour until his new buildings are ready, when the animal is returned to its master's flock. This is done to bring good luck to the place. The head wife of the chief is also supposed to suck a few drops of blood from the neck of a live goat whose vein is tapped for this purpose. Her husband must sleep the first night in her hut or she will consider herself grievously slighted. These rites having been observed, the Akikuyu consider that every precaution has been taken to ensure a healthy and prosperous village.

Swimming.

Most Akikuyu know how to swim, though their use of the art is generally confined to crossing flooded rivers. They invariably use the side stroke, and attain considerable speed. Swimming is not taught among the youth, but seems to be

acquired by watching others in the water. Nevertheless very few of the Akamba know how to swim, unless their villages are situated on the bank of a river.

Basket Work.

Rugara, or small vegetable panniers, are made from fibre-string (*rurigi*) obtained from the *mondoi* and *mugyo* trees. The bark is first stripped in long pieces from the tree, then unpicked by hand into a tow-like form, chewed in the mouth, and then rolled out by hand on the thigh. It is finally twisted into string ready for use. The *rugara* has small loop handles on each side, which are oval in shape, and is constructed on a framework of twigs, above which is woven native fibre netted in a kind of chain stitch. All kinds of vegetables and gourds are carried in the *rugara*, which is, in fact, the receptacle for all commodities except grain. *Kiondo*, or native bags, are also made from the same fibre. They are of varying size, and used for carrying native grain.

String.

Besides *rurigi*, the process of making which has just been described, *ruga*, made from the sinews of a bullock's thigh, is used for bow strings. It is plaited in two strands while raw, wound round a spindle, and left ready for use. *Ruga*, made from a goat's leg, is used for sewing skins together, but a single strand only is used.

Leather Work.

The *mukwa*, or strap made from raw hide, is used largely by both the Akikuyu and Akamba in carrying loads on their shoulders. The process of preparing hides is as follows :—

After a bullock is killed the carcase is flayed with sharp knives, care being taken to separate the outer layer of fat from the skin, and strips of hide of required length are cut from it while the hide is raw. The strips are soaked in boiling water for about an hour, and then curried with a short stick which removes the hair. This process is repeated for about three days, when the strap is greased and is ready for use. The only other use to which ox-hide is put is for the upper covering of the bed. The hide, after being stretched on the ground for twenty-four hours until it is dry, is scraped with a potsherd (*rugeo*). The legs, head and outside parts are cut off, and the remainder spread over a layer of grass on the bedstead.

The method of preparing a goat skin is as follows :—

The skin is first pegged out on the ground, and all the extraneous fat scraped off with a knife. After twenty-four hours the hair is scraped with an axe. The skin is then treated by a vigorous rubbing between the hands, and sheep's fat or castor oil worked into it until it is thoroughly supple. It is then ready for use. If a goat's skin is required as a *kizii*, or man's cloak, the hair is not removed, but oil is rubbed into the skin with the hands.

Both men and women prepare leather. The men sew their *kizii* with *ruga*, punching a hole with an awl called a *mukuha*. The edge of the *kizii* is often bound with a strip of leather from which the hair has been removed. The women sew their own clothes, and often sew on the borders tiny white beads which form a chain all along the seams.

Two leather bags, both called *mondo*, are used by the Akikuyu, and are sewn with *ruga*. The smaller one, which is about eight inches square, is made of the skin of the bush-buck or impalah, and is used for carrying tobacco, needles, and knives. It is generally worn round the waist. The large one, which is about a foot square, is made from the same skins, and is used for carrying salt, honey, and occasionally, on a long journey, for water.

Fire.

Fire is produced by means of the fire drill. The stick twisted between the hands (*kithagethi*) is cut from the *muchetha* tree. The block drilled is called *kika*, and is cut from the same tree. It is generally held down on the flat of a knife by one person, while the *kithagethi* is rapidly revolved between the hands of another. Dry grass is ready to receive the smouldering flame, and fire is soon produced. The Akikuyu always bring fire to a new house from the field, it being considered very unlucky to bring fire from another house. The owner would expect his goats to die and property to consume away if he broke this rule.

The Akikuyu believe in a fire god which is sometimes seen in a camp fire, but not in houses. They state that it often carries a man up into the air, when he is instructed as to what he should do to gain the favour of Ngai. After an hour or two he is deposited again by the fireside. My informant tells me that he only knows one man personally who has been carried aloft in this manner, but he has been told that several others have had a like experience. The hero of the occasion summons a council of the Elders next day, and they sacrifice a sheep and a she-goat to the fire god beneath the *mugomo* or sacred tree. The flesh is eaten by the Elders only, but the skin of the sheep is cut into strips and given to the women of the tribe, who wear it on their necklaces; it is supposed to bring them luck.

The she-goat (*mwati*), not yet having bred, is cut up into little bits, from which the elders take a bite or two and then lay the rest at the foot of the tree for Ngai to eat. The flesh of both sheep and goat is, however, first scorched over the fire which has been made under the tree. The next day a he-goat is killed for the young men, the strips of its skin being worn by them for a few days on the second finger of the right hand, and subsequently fixed on the spear.

Food

The Akikuyu live almost entirely on a cereal and vegetarian diet. Of the former the following is the chief list:—

						Swahili name.
<i>Mbemba</i>	...	maize	...	...	...	<i>mhindi</i> .
<i>Mohia</i>	...	millet	...	...	...	<i>mtama</i> .
<i>Mukombi</i>	...	small grain...	...	...	...	<i>mkonyori</i> .

					Swahili name.
<i>Muraiya</i>	...	}	...	...	...
<i>Mwere</i>	...		...	...	... <i>maveli</i> .
<i>Ugimbi</i>	...		...	...	... <i>wimbi</i> .

These are either eaten whole or ground into flour. *Mweri* and *mkombi* are the only two used to make gruel (*uchuru*).

Among vegetables and legumens are :—

<i>Ngwachi</i>	...	sweet potato	...	...	...	<i>kiazi</i> .
<i>Kikwa</i>	...	yam	...	..	...	... <i>kiazi kikuu</i> .
<i>Nduma</i>	...	native rhubarb	...	...	...	... <i>maiyyugwa</i> .
<i>Mwanga</i>	...	cassava	...	...	...	... <i>muhogo</i> .
<i>Kigoa</i>	...	sugar cane	...	...	...	... <i>mau</i> .
<i>Njugu</i>	...	tree bean	...	...	...	... <i>mbazi</i> .
<i>Thoroko</i>	...	a kind of haricot bean (red)	...	...	...	... <i>kundi</i> .
<i>Thuu</i>	...	black bean	...	...	...	...
<i>Mboshu</i>	...	a kind of red bean	...	...	...	...
<i>Njahi</i>	...	a black bean	...	...	...	... <i>fiwe</i> .
<i>Marigu</i>	...	banana and plantain	...	...	...	... <i>ndizi</i> .

Sugar cane is chewed as a thirst assuager, and is also pounded up for the manufacture of *njohi*, or native wine.

On very rare occasions beef is slaughtered, and more frequently sheep and goats. The meat of wild animals is scarcely ever eaten. Bread making is unknown. Milk, both of cows and goats, is much used. Only children drink it fresh (*mwithi*), and, if it is kept, the milk gourds into which it is poured are first rinsed out with cow's urine, then dried in the smoke, and finally wiped out with a cow's tail swish. The milk turns directly it is poured into the gourd, and becomes *iria rimata*. Butter is made by shaking the milk inside a gourd. The hard granules which subsequently separate themselves from the whey are called *ngorono*. Neither milk nor buttermilk (*uria*) is ever mixed with grain.

Uchuru (hot gruel) is made from flour and water, and on the occasion of a big feast is generally drunk before roasted goat's flesh is eaten. Marrow (*muthimu*) is much appreciated, and sucked from the bone. Fresh blood is drunk, and also mixed with milk. Besides being taken for its saline properties, it is held to have a strengthening effect on the drinker. Men, women and children all drink blood. Cereals are stored in small huts (*ikumbi*) built on piles. They are the property of the owner of the field from which the crop has been harvested. Rock salt (*igata*) bought in bazaars is used as seasoning in the cooking of cereals. Honey is often mixed with *uchuru* to give it a sweet taste.

Mode of Cooking.

The Akikuyu, even when pressed for hunger, keep their meat for two or three days before eating, and prefer it slightly high. Meat is generally either roasted on spits or placed on a kind of platform of twigs (*ndara*) over the fire. Meat is also

boiled, and generally preferred that way by women. The cooking pots (*nyungu*) are made of clay, and are set on three stones over the fire. They are cleaned out with cold water. The gravy or soup in which meat has been cooked is called *thathi*, and is much relished. Each woman cooks her own meal in her own hut, and shares it with her husband when he passes the night in her hut. The food of men and women is cooked together. The Akikuyu like their meat well cooked.

When grain is to be converted into flour it is first put into mortars (*nderi*) and pounded by women with long poles until it has been fairly well pulverized. The meat is then placed on a flat rock and is rubbed by the women with a cylindrical stone called a *theo*.

Manufacture of Drinks.

Two sorts of native wine are made by the Akikuyu, *njohi* and *uki*. *Njohi* is made from sugar cane which is cut when it has attained its full height; the outer rind is then pared off and the inside cut into little bits. A barked tree trunk, from the top side of which has been scooped out a series of little holes about the size of a small hand basin, is generally to be found lying close to the village of the principal chiefs. It is called an *ndiri*. These holes are filled up with handfuls of chopped sugar cane, which is pounded with long sticks by the women until it is reduced to a pulp. This is put into an oxskin which is laid over a hole in the ground so that it forms a concave receptacle. Water is now added and the pulp is taken in handfuls by the young warriors and the juice wrung out. When nothing but the latter remains in the skin it is called *ngogoyo ya igwa*, and is transferred to big gourds. Slices of the fruit of the *muratina* tree are added and are allowed to remain in the gourds for twelve or fourteen hours. After these have been removed the *njohi* is ready, but only the elders are allowed to drink this nectar, which is said to be very intoxicating, though I believe that the heads of African natives are more easily turned than is the case with Europeans. *Njohi* must be drunk off quickly, as it is said to keep for only twelve hours after it has reached its proper state. *Uki* is made from honey and water. To two gourds of water add one gourd of unstrained honey. The liquid portion of this mass is squeezed by hand and the wax thrown away. The residue is then placed in a vessel and left for about eighteen hours, when it is ready. Elders only (except on certain festivals) are allowed to drink *uki*, which is said to be quite as intoxicating as *njohi*. Like the latter it will only keep for one day.

Meals.

The Akikuyu eat whenever they feel hungry, but a meal is generally taken at daybreak by all the members of the village before going to their respective employments. This food is cooked in the evening and laid aside ready for the next morning. The women return from the fields at sunset bringing firewood with them and prepare the meal as soon as they return to their huts. The women and children eat first, having previously dished up the food of the men, who eat together, both married and unmarried men. Periodically sheep and goats are

sacrificed as an offering to Ngai. This is done, apparently, about every quarter, to propitiate the deity so that success may follow the owners of the village, and flocks and herds may prosper. The women eat a sheep and the men a he-goat. The ceremony, which is exclusively confined to the village, is as follows:—At sunset all the inhabitants are gathered together including women and children. A huge fire is built in the centre of the village. The elders kill both goat and sheep, the young men holding them. After both men and women have eaten to their heart's content of roast meat, the oldest woman in the village takes a piece of fat from the entrails, everyone else standing around her, and holding it aloft petitions Ngai to send prosperity to the village, to the men, women, and children; husbands to the women and health to the flocks and herds. She promises good conduct on the part of the members of the village and finally places the fat on the embers. (This ceremony is only one of the many adopted by the Akikuyu in their worship and petitions to Ngai.) The next morning all the village elders, young men and women drink *uki*, and the day is observed as a general holiday. The elders generally get drunk, but no one else is allowed to drink more than enough to produce a certain amount of exhilaration. No intercourse is allowed between men and women for eight days after this feast. The Akikuyu believe that if any infraction of this rule takes place a mortality among the flocks will ensue.

Invited guests or strangers have food brought to them if they have arrived from a journey and the other members of the family are not eating. In eating meat one man cuts up the carcase and apportions a share to everyone. The only implements used at meals are *kiuga*, a half gourd, and *kahiya*, a knife. The Akikuyu allay the pangs of hunger on a long journey by drinking water whenever it is procurable.

Religion, Fetishes, etc.

The Akikuyu do not believe in the soul of a man as distinct from his visible body. To dream of dead people in their estimation is highly undesirable. The dreamer takes live charcoal in his hands next day and rubs it between his palms saying, "I shall not dream of that dead man again." Wraiths are not believed in neither are animals credited with superhuman intelligence.

A sheep is generally killed by the nearest relative after a death in a village, but the idea is not a sacrificial one. The owner disembowels the goat, throwing the dung from its entrails into the water of the nearest stream, with which he washes himself all over and is supposed to purify himself thereby. Until he has done this he cannot eat with others.

Only the elders of a village are buried in the ground, young men and women being thrown into the jungle.

Obsession and Possession.

All diseases are regarded by the Akikuyu as having been caused by *Ngai Mwuru* or the bad deity. Nightmares, however, are looked on as merely bad dreams and not ascribed to his malevolent influence. The same view is taken of

erotic dreams, but in the case of a married man when travelling away from home it is looked on as portending evil, and he sacrifices a goat as soon as he returns to his village.

The Akikuyu apparently do not believe that a demon enters into a man during illness, but they say if Ngai foreordains that he will live, he will do so, and *vice versa*. A medicine man, however, is generally called in if the illness does not leave the sick man for several days. A goat is slaughtered and the blood caught in a half gourd. Into this the medicine man pours the medicine from his *mbutho* or phial, the ingredients of which are said to be the extracts of many herbs and the bark of trees. To this is added a little honey and, the whole being stirred up, the patient drinks it off, the medicine man having first made a few passes round his head with the *mbutho*. Many days may elapse before a gradual recovery sets in.

Hysterical and epileptic fits are called *ngoma*, and are supposed, together with all other illnesses, to have been sent by *Ngai Mwuru* on account of the previous wrong-doing of the sufferer.

Spiritualism.

The medicine man (*murogi*) holds conversation only with the dead man whose life he has been unable to save. According to his own statement he goes out at dead of night and visits the corpse where it has been thrown out into the bush. Placing a little dust made from herbs and bark on the palms of his hands, he lays them on the dead man and says, "Get up." The dead man gets up and says, "Who has brought you here?" The wizard answers, "I know not. But do as I tell you and revile your father, mother and your brothers." The dead man is supposed to obey and after the medicine man has thrown a little more medicine on him the conversation is ended and the latter goes his way. Those reviled by the corpse are supposed to generally fall ill soon afterwards and occasionally even to die. It is only with the recently dead that the wizard claims power to converse. This kind of *murogi* is stated by the Akikuyu to be a malevolent person who has no friends and who spares no one in the exercise of his craft. There are other medicine men who do cure sick people.

Idolatry.

The Akikuyu make small images of clay which represent men and women. They are not idols but seem more in the nature of dolls. The children play with them, and in a dance between the unmarried men and girls the former carry the dolls, both male and female, in the palms of their hands. These images seem to be part of a kind of game concerning which the Akikuyu are unwilling to say much. It is also stated that they are used in certain ceremonies, such as the praying for rain and the celebration of the gathering in of the crops.

Spirits and Demons.

The Akikuyu state that they sometimes see spirits at night. The man to whom the apparition appears gets a piece of fat with which he rubs his eyelids.

The appearance of the spirit is said to be like that of the colobus monkey. The next morning a sheep is generally killed as a sacrifice to Ngai. Both disease and death are held to be caused by the latter. Demons appear only in dreams which are precursors of misfortune.

Nature-Spirits.

The *mugomo* tree, on account of its size and fine appearance, is regarded as the sacred tree, and it is not ruthlessly cut down as is the case with all other trees which impede clearing operations during the making of fields. Ngai is supposed to live up in its branches, but he descends in order to eat the meat of the sacrifice, which is offered below. Groves are favourite places of worship for the Akikuyu, and animals found therein are regarded as sacred, especially the colobus monkey, which is held to be under the special protection of Ngai in these localities. Elsewhere it is ruthlessly slaughtered for its pelt, which contributes towards the full dress of a warrior. Sheep and goats are sacrificed beneath the *mugomo* tree either to intercede for rain or for a sick child, or to thank the deity for prosperity and to pray him to avert future harm. The whole of the meat is left underneath the tree, the fat being placed in a cleft of the trunk or in the branches, as special titbits for Ngai. Those who worship merely cross their lips with a morsel of meat before sacrificing.

Polytheism.

The Akikuyu recognise three gods:—two good and one bad. The first sends riches, such as cattle, and goats, and also rain, thunder and lightning; the second is responsible for good wives and healthy children, and to the third or bad deity are attributed all illnesses, and the loss by death or war of livestock. All three gods are called Ngai. To the god who sends riches, supplication and sacrifice are made before war. He is considered the supreme deity and credited with divine power. If a man is good this Ngai can give him much property. If he does wrong the same power can strike him down with disease and cause his livestock to dwindle away. The Akikuyu regard their deities as common to other tribes, such as the Akamba and Masai. Generally speaking it seems to be their belief that constant sacrifices are necessary to propitiate even the good deities. The sudden death of a man, for instance by lightning, is ascribed to some evil act of his life being punished by Ngai.

Worship.

The office of priest (*mundu mugu*) is hereditary. The father educates his son, or two sons if he has them. The same person is sometimes chief and priest. When a priest is exercising his spells over a sick person he has no connection with his wives, as it is supposed that by so doing he will spoil the cure.

The following are the names of the dance-festivals:—

- (1) *Ngakare*, the dance held after war, to celebrate the death of those of the enemy who have fallen.

- (2) *Ruhuyu wa Ngombe*, the festival to celebrate the capture of cattle during war.
- (3) *Irua*, the festival before the circumcision of boys.
- (4) *Uregu*, ditto before the circumcision of girls (*Kichukia*, *Nguchu* and *Mugoyo*). The dances of the unmarried men and girls are not festivals but love dances. *Muthunguchi*, the dance of the Elders and married women, is also of an erotic nature.
- (5) *Nguru*, the festival of the warriors before going to war.

Prayer is only offered by the Akikuyu at the time of sacrifice when it is a public ceremony. In times of illness or epidemic among the herds prayers are offered to Ngai, but they are always accompanied by sacrifice. Only temporal benefits are asked for. One may say that prayer, as we understand the word, is unknown to the Akikuyu.

Sacrifices are offered to all three deities. The ceremony is always a public act. Priests must be present and intercede with Ngai. Sheep and goats are the invariable sacrifice offered, and Ngai is supposed to be appeased by eating the meat which is left for him. As the celebrants always retire and leave the meat behind them they are unable to explain how Ngai possesses himself of it. They say that, if a man returned and ate or stole it, he would die.

Austerities.—Spiritual communications are said by the priests to be received only during dreams. The only austerities they are called on to practise during the exercise of their spells are interdiction *a mensa et toro* as far as their wives are concerned.

Purification.—After bloodshed or contact with the dead (*mukuu*) the Akikuyu purify themselves. All the elders are called together and a sheep is slaughtered. One of the elders cuts a strip of hair from above both ears of those who have shed blood. The hair is thrown away, but after this ceremony the warriors rub themselves with the dung from inside the sheep mixed with water. The body is finally cleansed with water only. (The remainder of the hair on the head of the purified person is subsequently shaved off by his wife.) The elders then eat the meat, but those purified may not do so.

Contact with women is forbidden for one month after the shedding of blood. A similar purification is carried out after the contact with the dead, a goat being slaughtered and its dung rubbed on the hands and body of those defiled.

Miscellaneous Ceremonies.—Children are named on the day of their birth by the midwife (*mwitchiarithia*), who has been instructed previously by the mother. A goat is generally killed on the day of the birth of a child by all Akikuyu of ordinary affluency.

Marriage Ceremonies.—When a woman has been bought by her husband and goes to his village, he finds a new house for her. She lives in this hut together with her most intimate girl friends for five days, during which time they bewail day and night her approaching loss of maidenhood and freedom of life. On the sixth day the husband is allowed to have access to her, and her former companions return



FIG. 1.—KIKUYU FINGER RINGS.

Photographs by R. Meinertzhagen, Esq.



FIG. 2.—A KIKUYU ELDER.



FIG. 3.—YOUTH PAINTED FOR THE "IRUA."

Photographs by W. Scoresby Routledge, Esq.

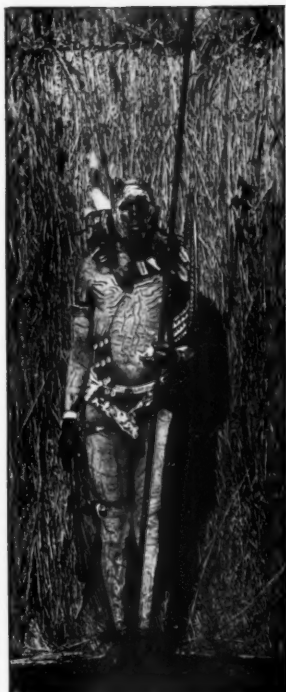


FIG. 4.—BODY ORNAMENTED WITH WHITE CLAY.

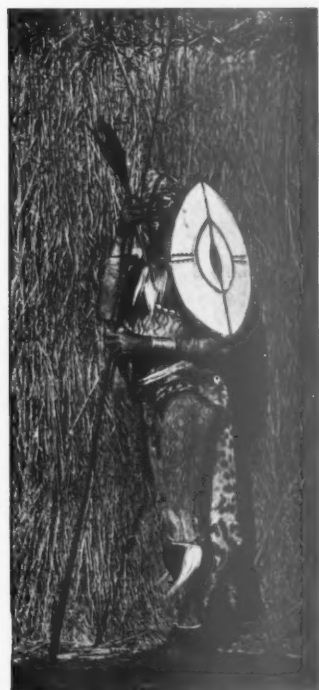


FIG. 5.—"NDOMI" OR DANCING SHIELD.

FURTHER NOTES ON THE KIKUYU TRIBE, BRITISH EAST AFRICA.



FIG. 1.



FIG. 2.

DRESS WORN BY GIRLS AFTER CIRCUMCISION.

Photograph by R. Meincitzhagen, Esq.

Photograph by W. Scoresby Routledge, Esq.



FIG. 3.—DRESS WORN BY BOYS
AFTER CIRCUMCISION.

Photograph by R. Meincitzhagen, Esq.



FIG. 4.—NATIVE HURDLE USED AS A DOOR.

Photograph by W. Scoresby Routledge, Esq.

FURTHER NOTES ON THE KIKUYU TRIBE, BRITISH EAST AFRICA.

to their homes with a present of fat. After a month of married life a sheep is slaughtered, the eating of which constitutes a kind of marriage feast. The election of a chief does not partake of the nature of a religious ceremony. In the case of one tribe making a treaty with another, the warriors of one side first come and receive from their future allies two sheep and much food. This is eaten on the spot. The warriors then return to their own country and a visit from their late hosts follows with a similar feast. Many palavers follow and friendship is finally sealed between the two tribes.

Circumcision.

The practice of circumcision prevails everywhere among the Akikuyu. It is practised upon both sexes as soon as they reach puberty. Before the latter period a girl is known as a *karegu*; after circumcision a *mwaireru*. A boy is known as a *kahee* until he becomes a *mwanahe* or young man. The custom is said by the Akikuyu to have the same origin in regard to both males and females, viz., it has been handed down from former generations. Skilled old men, of whom there are always a few in every district, perform the operation on boys, and old women on girls. The position of circumcisor (*muruthia*) is an honourable one and is hereditary. Males are cut with a special knife with a blade about 4 inches long and an inch broad; the foreskin (*ngwathi*) is cut off, but a portion of it which is left is drawn down below the glans, where it forms, after healing, a large excrescence of skin. This is very marked in some cases. The clitoris (*mugura*) of the female is excised with a scalpel, and, in the case of both sexes, the parts cut off are thrown away. For about a month after the ceremony both girls and boys are known as *kichairi*. The latter wear a long skin robe (*nguo ya maribi*) until their wounds are healed. (Plate XVIII, Fig. 3.) Girls wear an upper garment of skin over their breasts which is known by the same name, and coils of wire around their heads, from which depend small white discs (*ngenyi*), made either from ostrich eggs or goats' bones. (Plate XVIII, Figs. 1 and 2.) Castor oil is used by both sexes to heal their wounds, and for two months circumcised persons are exempt from labour, one month during healing and one month afterwards.

Circumcision is regarded as neither a religious duty nor a law among the Akikuyu, but only as a custom. Nevertheless it is counted a disgrace for a married woman to have connection with an uncircumcised boy, and, so far from the operation ever being dispensed with on account of the pain it causes and for fear of it deterring proselytes, boys and girls who are afraid are caught and made to be cut against their will. The recognised name for circumcision among the Akikuyu is *mambura*. It is not considered to render marriage prolific, and, although the Akikuyu cannot tell you what advantage they derive from the practice, it is in full force to-day and not in the slightest degree likely to die out.

A METHOD OF ESTIMATING SKULL-CAPACITY FROM PERIPHERAL MEASURES.

BY JOHN BEDDOE, M.D., LL.D., F.R.S.

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I WISH to bring before the Institute the methods I have devised for estimating the capacity or content of the skull, whether in the dead or the living subject. These methods have already been discussed at some length in an article in *L'Anthropologie*, "On the evaluation and significance of cranial capacity"; but in the present paper I shall make use of new proofs, and make a very slight modification in the process.

The methods are based on the external arcs or curves of the skull or of the living head, as the case may be.

Boas, in an article on the correlations of the skull, based on the measurement of about fifty Sioux Indians, expressed the opinion that these circumferential curves afforded the most hopeful means of constructing satisfactory estimates of capacity. Professor Pearson, if I understand him rightly, thinks they are inherently incapable of being turned to much use in this way. And my illustrious friend Topinard thinks the unavoidable difficulties in the way will prevent the production of any scheme, however based, giving sufficiently accurate results to be of much value. These difficulties include the racial and individual differences of form, those of thickness of bone, and in the case of the living head, those of thickness of integument and those connected with the hair; also the variable length of the sub-occipital line. In truth a mean error of about fifty cubic centimetres seems about as much as we can expect in a formula not specially calculated for one particular race or type; but even that low ideal seems to me worth striving for.

The following is a list of the principal methods which have been proposed hitherto, so far as I am aware—

1. *Manouvrier's*.—Divide the product of the glabello-maximal length, the maximal breadth and the basiobregmatic height, by 2270 (in males). The result is in accordance with the actual determinations made by shot and by the method of Broca, but is considerably larger than would be gotten from the same material, if measured by the method of Flower, which is commonly used in this country. In computation, I subtract 3.3 per cent., or $\frac{1}{30}$, from the number of cubic centimetres obtained, in order to get the equivalent in the terms of Flower.

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Manouvrier modifies his divisor considerably for diverse races, and also to compensate for unusual thickness of bones; in his own masterly hands the results are wonderfully good.

2. *The method of Mme. Pelletier.*—This differs from Manouvrier's by the substitution of the ear-height for the basiobregmatic, and is therefore practicable in some cases where the basion is absent or unavailable. The divisor here is 2020 for male, and 1940 for female skulls. This method might perhaps be adapted to the living head, by the subtraction of, say, 10, 10, and 8 mm. respectively from the three diameters employed.

3. *The method of Pearson and Lee.*—Use the same factors as those of Mme. Pelletier. Multiply the product, for males, by .000,337, and add 406; for females, multiply it by .000,400, and add 206. P. and L. have also special formulæ for certain races; also one for the living head, in which they allow eleven millimetres off the length, breadth and ear-height respectively for integuments; probably this is slightly excessive.

4. *Welcker's Tables C and D.*—These are experimentally constructed tables, the former based on Welcker's Modulus— $L + B + H$, the latter on the horizontal circumference. In each of them the influence of the kephalic index is taken into account, a brachykephalic skull being usually, of course, much larger than a dolichocephalic one of the same modulus. Welcker's methods are very simple and easy, for those who possess his tables, or have access to the *Archiv für Anthropologie*, in which they were published. The two tables often differ widely; and I can see a clear advantage in combining the two and using the mean result.

5. *My own method.*—For the skull, multiply together one-third of the horizontal circumference, one-third of the nasio-inial arc, and one-half of the transverse arc, measuring from opposite the centre of the auricular meatus or ear-hole. Reduce the product by 0.3 per cent. for every unit of kephalic index below 80, and increase it to a similar extent for every unit above 80. Lastly, divide the product by 2000. Thus, supposing the product to have been 2,800,000, and the kephalic index 75, the ultimate figure will be $1400 - (1.5 \text{ per cent.}) 21 = 1379$; or, the kephalic index being 83.3, it will be $1400 + 14 (1 \text{ per cent.}) = 1414$.

Unfortunately, few observers measure the ear-height; and still fewer note the position of the inion in the sagittal arc; and those who note the one almost invariably neglect the other. In the calculations presented in this paper, I have reckoned the infra-occipital at 12.5 per cent. of the sagittal arc, where I had no precise information on the point. This proportion would be fairly accurate according to my own observations, and to such of Duckworth's and Shruballs' and of French anthropologists as I have been able to gather; but the proportion of 15.7,¹ which Johannes Ranke found in 100 Bavarians "gives one to think." Perhaps 13 per cent. would have been better; this would have left 87 per cent. of the total sagittal

¹ These are *my* figures, reckoned on Ranke's data,

arc, of which $\frac{1}{3}$, or 29, would be employed as a multiplier. This would reduce my capacity estimates, however, by 8 c.c. on an average, perhaps too much.

I will now proceed to give comparative examples of the working of these several schemes. In my paper in *L'Anthropologie* I have given such examples in great detail, using the greater part of the material in the *Thesaurus Craniorum* of Barnard Davis and in Flower's catalogue, so far as relates to males; but at present, I shall use little except the data in Miss Fawcett's elaborate catalogue of measurements of the Naqada; and this is done, not only on account of its completeness and other merits, but because the plans of Pearson and Lee are largely based upon this same catalogue; and if I can show that my own, based on other foundations, come out well in competition with those of Pearson and Lee, I shall be able to proceed more confidently to the development of my plan for estimating the capacity of the living head. Pearson's and Pelletier's, both using the ear-height instead of the basio-bregmatic, would give a better foundation for calculating from the living head than would Manouvrier's or any of Welcker's, which use the basio-bregmatic height.

Here it should be noted that not merely the approximation of calculated to measured capacities, but the mean amount of variation in the individual cases, and the range of error or variation, should be taken into account. For the measurers, or rather the gaugers or calibrators, are no more infallible than the calculators; they differ quite as widely among themselves. Welcker went into this subject almost exhaustively; he concluded that Davis's procedure with sand gave him, for the same cranium, on an average, 100 cubic centimeters more than his (Welcker's) own¹ in which he used peas. Similarly Broca's measure was between 60 and 70 above Welcker's, Flower's about 40 (an over-estimate, I fancy), Weisbach's somewhere about 60, Brösike's (who measured the Berlin collection) about 35, those of most other authorities yielding a small excess; while Schaaffhausen's,² Morton's, Ecker's, were from 30 to 50 below Welcker's, Ranke's being omitted, probably for want of material fairly comparable with those box-headed, big-cerebellumed Bavarians.

Now these differences do not arise only or chiefly from the different materials employed, as sand, shot, rapeseed, peas, but to a very large extent from the methods of manipulation, of pouring, shaking, compression. It is to be regretted that few observers take the trouble, when publishing their results, of giving details of their procedure. They think the matter much more simple than it really is.

Welcker certainly made out a good case for his own procedure and his own standard of capacity; but in this country of late years Flower's are generally followed or aimed at by those who wish to be accurate; and I have therefore taken them as a standard. The figures which I have gotten by the methods of Manouvrier and Mme. Pelletier I have, as already mentioned, reduced by $\frac{1}{30}$

¹ 103 to 105; but in 10 which D. presented to W., and which they both gauged, 92 c.c.

² Schaaffhausen, in his latter days, seems to have augmented his standard. See Welcker's *Capacität*, etc.

or 3·3 per cent. (usually between 40 and 50 c.c.), in order to bring them into line with Flower.

In the following tables, P and L stands for Pearson and Lee's ordinary formula as explained above, and N. for their formula specially adapted to the Naqada race, B for my own one, C and D for Welcker's formulæ derived from his modulus and from the circumference respectively; and the last column gives the mean result of these two, which I find to be usually preferable to either of them, and to have some of the advantages which I claim for my own. Thus an elliptic or trapezoid skull, with the same L., B., and H., will usually have a larger circumference and a larger capacity than a pentagonal one, or one of Sergi's acmonoids; and this would be indicated by my plan or by Welcker's D, or by his mean, but not by the other schemes.

The first table embraces three decades of Naqada males, the first thirty undoubted males, that occur in Miss Fawcett's catalogue. The actual capacity stated is hers, I presume, in all cases. It seems to approach the standard of Flower, so far as it is possible to make an estimate.

	Cap.	Man.	Pell.	P. and L.	N.	B.	W.C.	W.D.	W. Mean.
1st Decad ...	1363	1374	1357·6	1381·5	1388	1383	1334	1391	1362·5
Total Error (by Fawcett)	—	+410 —182	+305 —360	+424 —297	+486 —242	+408 —198	+168 —462	+430 —147	+209 —229
Mean Error...	—	59·2	66·5	72·1	72·8	60·6	59·7	57·7	43·8
Range of do.	—	+137 to—94	+135 to—124	+167 to—177	+180 to—161	+29 to—23	+73 to—157	+191 —117	+132 to—137
2nd Decad ...	1387	1439	1373	1369	1377	1380	1376	1384	1380
Total Error...	—	+668 —444	+330 —469	+283 —473	+312 —411	+337 —405	+337 —409	+377 —476	+352 —319
Mean Error...	—	81·2	79·9	75·6	72·3	74·2	74·6	85·3	67·1
Range of do.	—	+337 to—99	+281 to—112	+227 to—103	+241 to—99	+264 to—97	+262 to—73	+221 to—118	+241 —90
3rd Decad ...	1404	1411	1346	1374	1384	1398	1367	1396	1381
Total Error...	—	+212 —138	+13 —515	+101 —400	+132 —335	+124 —184	+80 —448	+171 —257	+88 —307
Mean Error...	—	35	62·8	50·1	46·7	30·8	52·8	42·8	39·5
Range of do.	—	+113 to—65	+13 to—109	+54 to—115	+60 to—97	+24 to—90	+67 to—107	+70 to—94	+36 to—92

	Cap.	Man.	Pell.	P. and L.	N.	B.	W.C.	W.D.	W. Mean.
Total of 30 ...	1385	1408	1359	1375	1384	1363	1359	1389	1374
Total Error...	—	+1200 —464	+648 —1344	+708 —1170	+930 —988	+869 —787	+581 —1319	+978 —880	+649 —855
Mean Error...	—	57·3	69·6	65·9	64	53·2	63	61·9	50·1

In the first decad M. and B. have the least mean error; but the mean of Welcker's two schemes gives a still better result. Man. gives the least range. P. and L., and the special Naqada formula, are at the bottom. This is due to the inclusion of one very large cranium (No. 26) and two very small ones (44 and 66), these formulæ being ill adapted to extreme sizes.

In the second N. is best, or least bad, as to mean error, but the mean of Welcker's two is again superior. The general inferiority of extent of error in this decad is due to the inclusion of a large skull (No. 96), to which Miss Fawcett assigns the low capacity of 1266 c.c. If there be no mistake here, this skull must be one of extraordinary thickness and weight; but there is no note to that effect. Manouvrier's rule in this case gives (uncorrected) an excess of no less than 337.

In the third decad the worst of the competitors is better than the best in the second. B. stands at the head as to mean error, with Manouvrier following; and the former is also best as to range.

Taking the three decads together, the order as to mean error is as follows:—First (best), the combination of Welcker's; second, Beddoe; third, Manouvrier; fourth, Welcker D; fifth, Welcker C; sixth, Naqada; seventh, Pearson and Lee's ordinary; eighth, Pelletier; and in range of error nearly the same, the special Naqada formula of Pearson and Lee standing lowest save one.

In the next table the rival systems are tested by, firstly, the whole series of available male Naqada crania; and secondly, by the largest eight (over 1500 c.c.) and the smallest (under 1300 c.c.) of this series, which numbers from 88 to 140 in the several measurements.

	Act. Cap. (Faw- cett).	Man.	Pell.	P. and L.	N.	B.	W.C.	W.D.	W. Mean.
Whole Series	1381	1378	1333	1386	1380	1400	1397	1407	1402
Error ...	—	—3	—48	+5	—1	+19	+16	+26	+21
Biggest 8 ...	1566	1540	1502	1456	1473	1522	1499	1501	1500
Error ...	—	—26	—64	—109	—93	—44	—67	—65	—66
Mean Error	—	44·1	63·6	109·6	93·4	45·5	66·1	70	65·3

	Act. Cap. (Faw- cett).	Man.	Pell.	P. and L.	N.	B.	W.C.	W.D.	W. Mean.
Least 10 ¹ ...	1258	1302	1273	1298	1299	1293	1285	1287	1286
Error ...	—	+44	+15	+40	+41	+35	+27	+29	+26
Mean Error	—	48·8	37·5	39·7	41·1	44	42·9	45·4	34·7
Difference be- tween big and little.	308	234	226	153	174	229	214	214	214

In the first line of this table, Man. and B., though not specially constructed with a view to the Naqada, as Pearson's N. was, hit the mark fairly well.

All the schemes fail to do full justice to the bigness of the big and the littleness of the little respectively; but this failing is especially marked in P. and L. and in N., in both of which it is inherent and characteristic. These Naqada skulls evidently increase in capacity in a greater ratio than they do in size, that is, the bony shell does not increase much in thickness with an increase of capacity; whereas Professor Pearson's schemes appear to have been constructed on the contrary assumption.

In the next succeeding table, I have utilized several small series.

1. General Pitt-Rivers's Worbarrow Romano-Britons. Unfortunately Pitt-Rivers did not take the sagittal arc; but as he had these Worbarrow skulls drawn to scale in profile, its length may be conjectured with some confidence.
2. Five male Veddahs, described by Professor A. Thomson, in Vol. 19 of the *Journal of the Anthropological Institute*. The ear-height is conjectural; but I have the guidance of Barnard Davis's Veddahs. I have allowed for a difference of fifteen between basio-bregmatic height and ear-height—quite enough I fancy, as Thomson remarks, "These have none of the massiveness and ruggedness of macrocephalic Australian skulls."
3. Four Kilwa negroes, from the interior. Measured by Flower and Shrubsall; the latter gives my sagittinial arc; the ear-height is conjectural. I have allowed 20, 20, 18 and 19 mm. in the several cases for the difference.
4. Eight males from Sumatra, taken from a paper by Professor Giuffrida-Ruggeri, of Rome, who is kindly making a trial of my methods. I think his gauging agrees fairly with Flower's. The mean height in the eight is 139·6; and I have allowed $\frac{7}{8}$ for the ear-height, leaving 17·5 for the difference, which suits P. and L. exactly; with either a larger or a smaller difference they would not come out so well.

¹ No. 96, already referred to, and Nos. 381 and 384, are excluded as anomalous: they are evidently extremely thick, if correctly measured.

		Cap. (Flower).	Man.	Pell.	P. and L.	B.	W.C.	W.D.	W. Mean.
Worbarrow 6	...	1441.6	1437	1433	1416	1458	1384	1444	1414
Mean Error	...	—	31.5	42.3	50.6	44	61	78	67
Range—from	...	—	+68	+53	+40	+94	+20	+152	+86
to	...	—	—66	—137	—147	—75	—128	—77	—117
Veddahs 5	...	1372	1303	1319	1332	1342	1277	1346	1312
Error	...	—	—69	—53	—40	—30	—95	—26	—60
Mean Error	...	—	69	56.4	54.8	36.6	95	45	60
Range—from	...	—	—16	+8	+38	—9	—51	+49	—24
to	...	—	—95	—99	—75	—93	—137	—71	—84
Kilwamen (Wahiaou) 4.	...	1289	1310 ¹	1303	1323	1272	1333	1370	1351
Error	...	—	+21	+14	+34	—17	+44	+81	+62
Mean Error	...	—	21	17	34	18.5	44	81	62
Range—from	...	—	+46	—5	+20	—42	+15	+19	+17
to	...	—	+90	+27	+50	+4	+59	+155	+107
Sumatra 10	...	1429	1460	1456	1430	1438	1411	1371	1391
Error	...	—	+31	+27	+1	+9	—18	—58	—38
Mean Error	...	—	36.5	38.3	40	65.7	44.2	57.8	54.1
Range—from	...	—	—39	—30	—81	—85	—104	159	—133
to	...	—	+159	+171	+74	+183	+79	+47	+44

In the Worbarrow men Manouvrier is best, but none of the procedures stand badly except Welcker's.

In the Veddahs, on the contrary, the error and mean error are large in all the columns except B. and W. D. both peripheral; but this is partly due, I think, to the fact that Professor Thomson measured with shot in the once-favoured Challenger method, so that his capacities are comparable with Broca's rather than with Flower's. Manouvrier's figure, for example, would have been 1348, only 24 below the measured 1372, had I not reduced it in order to bring it to Flower's standard. Professor Thomson used the top of the meatus.

In the Kilwa men Pel. and B. and M. stand very well, and P. and L. fairly. This is a very homogeneous lot.

¹ M, Manouvrier's formula for negroes.

In the Sumatrans all, P. and L. especially, come very near Professor Ruggieri's measurements in the average; but in the mean error B. almost alone appears badly. This is due to the inclusion of two thick rugged crania, with strong muscular attachments; such skulls seem usually to affect their arc-measures even more unfavourably than their diameters. These Sumatrans are extraordinarily varied in their cranial characters—more so than any people, civilised or uncivilised with whom I am acquainted; their kephalic index, for example, varies from 71·5 to 93·3; but possibly several tribes may be represented in this small collection¹

My next and last table consists of twenty Australian blackfellows' crania, reported on by Mr. Duckworth, who duly divides the occipital, but does not measure the ear-height. This I have estimated at 20 mm. less than the generally accepted (basio-bregmatic) height. The lower occipital here averages 48·1 mm., *i.e.*, more than $12\frac{1}{2}$, but a little less than 13 per cent. of the entire sagittal (nasopisthial) arc.

	Cap.	Man.	Pell.	P. and L.	B.	W.C.	W.D.	W. Mean.
20 Australians ...	1270	1273	1306	1326 ²	1305	1369	1323	1346
Error ...	—	30	36	56	35	99	53	76
Mean Error ...	—	39·3 ³	47·6	74 ⁴	53·3	146	58·6	91·4

Data, L. 186·5, B. 131·1, H. 129·3, E.H. 109·3, C. 512, S.A. 315, Q.A. 293·4.

Here M. and even Pel. and B. have a distinct superiority over the rest; and there can hardly be any mistake about this, as the figures for the two decads constituting the twenty (the entire available series), are almost identical. Welcker on the whole is disappointing. With all respect to his illustrious memory, I am inclined to think his tables susceptible of improvement; but it would be a work of much labour. In this case his circumferential is far better than his diametral plan.

I think I am entitled to say, from the examples already given, that my method may rank with almost any of those with which it has been brought into competition. Manouvrier's, of course, is more accurate; but B. is superior to all others in mean error, which seems the best criterion. I am not concerned about proposing it as a substitute for any of these for estimating the content of the dry skull. It has no advantage of convenience over Manouvrier's or Welcker's, except where the basion is wanting, though it may occasionally have some over the ear-height methods, as these latter are difficult to carry out without

¹ The mean of the mean errors in the ten series for which I have computed them comes out as follows: Manouvrier 46·5, Beddoe 47·5, Pelletier 51·2, Pearson and Lee 58·5, Welcker mean 58·5, Do. D. 61·6. Do. C. 68·7. The fair position of Pelletier is somewhat in favour of the ear-height as a measure.

² On Aino scale 1307.

³ On Manouvrier's Australian formula.

⁴ On Pearson's general formula: on his Aino formula it would be 71.

special apparatus not always at hand, while mine needs at most callipers and a steel tape. It is in order to bespeak a favourable reception for my plan of estimating the content of the living head, that I have begun by proving the practical soundness of its principles.

We have not, and cannot have, such a well-founded standard for the living head as those of Welcker, Flower, etc., for the dry skull. It is needful to set up an arbitrary one; and this I have done, after much consideration of the brain-weights recorded by Boyd, Peacock, and others in Britain, and by divers French anthropologists.

I suppose the average male brain-weight of Englishmen to be over 1350, and the average capacity of the skull somewhere near 1500. The subject is very complex; sundry considerations enter into it which are often passed by without notice, such as the excess over 1000 of the specific gravity of the brain, and the greater size and capacity of the fresh compared with the dry skull. Manouvrier thought the brain filled 87 per cent. of the cavity; but he was working on Broca's lines; and on Flower's he would probably have said 90 or 91. Welcker allowed still more. I have reckoned on about 90, but perhaps even this is too little. I think the quantity of the fluids is generally over-rated.

I suppose a capacity of about 1500 c.c. to correspond roughly, in our mesocephalic English, to a circumference, including hair in medium quantity of 570 mm.,¹ which is about the average. Welcker put the European means lower than this, but in a series of 15 Englishmen even he found a capacity of 1530. And Davis, in his 16, found an average of 80.2 ounces of sand, which, converted into cubic centimeters, would be about 1595, and reduced to Flower's standard would still be 1515 c.c.

Fixing our standard thus, we shall find that it is fairly well attained by the following process.

Multiply together $\frac{1}{3}$ of the horizontal circumference, $\frac{1}{3}$ of the nasio-inial (sagittal) arc, and $\frac{1}{3}$ of the auriculo-transverse arc; $1/2000$ of the product will give a very rough approximation to the size or weight of the brain (of which the latter of course is the larger). But in order to get the capacity, we must add, for every unit in the kephalic index over 50, 0.3 per cent. Thus, where the index is 74, add, for every unit in 24, 0.3 per cent. of one two-thousandth of the product of the three dimensions employed. Let these dimensions, the third parts of the three curves or arcs, be $\frac{540}{3}$, $\frac{360}{3}$ and $\frac{345}{3}$, the product of which is 2,484,000, whereof one two-thousandth is 1242. $0.3 \times 24 = 7.2$; and 7.2 per cent. on 1242 is 89. $1242 + 89 = 1331$ c.c., which is the capacity of the head in the subject

¹ See Ranke. But he was dealing with round-headed or cuboid Bavarians. I got 569 in 40 Wiltshire men, and 577 in 40 upper-class Englishmen; and Dr. Rowe, of Bradford, 566 in 80 West Yorkshiremen.

Similarly in a head whose curvilinear measurements are 570, 360 and 360, and whose breadth index is 80, we have $\frac{190 \times 120 \times 120}{2000} + (30 \times 0.3 \text{ per cent.}) = 1398 + (9 \text{ per cent.} = 126) = 1524 \text{ c.c.}$

It is difficult to make any comparison of these results with those of other methods, so small is the number of cases available; besides, ear-height measurements on the living made with craniometers, unless conducted with extreme care, are not very reliable.

But Pearson and Lee have made some experiments in this way. Two eminent professors and Fellows of the Royal Society, measured both by them and by me, yielded to them a calculated mean capacity of 1525, to me one of 1516. I have endeavoured to apply their method (which is the same as that for the skull, retrenching from the length, breadth, and ear-height, respectively, 11 mm. in every case) to some series of my own, gotten since the production of my paper in *L'Anthropologie*, and therefore hitherto unpublished. For much of this material I am indebted to Dr. Rowe, of Bradford, Yorkshire, who uses my own methods with skill and accuracy. The difficulty lies in the estimation of the ear-height. Venn's extensive observations put it at about 5.3 inches or 134.5 in Cambridge students; but he found it distinctly higher in first-class men than in the rest of his subjects. Barnard Davis put it at 4.9 inches = 124.5 mm. in the English skull, which, on Welcker's plan (Wachsthum and Bau) would have been 132.5 in the living subjects.

The ensuing table exhibits my own appreciation of the capacity of the above-mentioned series, together with what would be, I believe, the appreciations of Pearson and Lee, and of Mme. Pelletier. Possibly those of the latter should be a little larger, for I do not suppose she would think it needful to subtract quite so much as 11 mm. from each of the three dimensions, length, breadth, and ear-height.

TABLE.

	L.	B.	Cir.	S.A.	Tr. A.	K.Index	Bed.	Pell.	P. & L.
9 men of superior intellect.	199.2	155.4	586.5	369.2	373.6	78.1	1631	1614	1543
10 men less distinguished.	197.5	154	583	362.7	371.4	77.9	1577	1596	1530
10 Yorkshiremen, mostly upper class.	191.4	153.9	573.5	358	370.7	80	1552	1526	1483
30 Yorkshiremen, mixed class (Dr. Rowe).	193.1	150.3	569	353.6	374.7	77.83	1490	1486	1453
60 West Yorkshiremen	191.2	149.2	563.5	350.6	361.5	78.1	1435	1466	1438

I have allowed here 125 mm. as ear-height in the skull in the first two series, 124 in the third, 123·5 in the fourth, and 123 in the fifth ; all these seem probable conjectures. But for fairness' sake, I append what would be the results if some other possible ear-heights were assumed.

	Ear height, 123.		Ear height, 128.	
	Pell.	P. and L.	Pell.	P. and L.
9 1st Grade	1591	1528	1658	1574
10 2nd Grade	1571	1512	1634	1557
10 Yorkshiremen, Upper Class ...	1514	1474	1575	1518
30 " Mixed	1480	1448	1540	1491
60 "	1466	1438	1525	1480

The nine first grade men include a statesman, an astronomer, a geologist (F.R.S.), a scientific surgeon, an eloquent divine, a University professor of jurisprudence, an archæologist, a literary antiquarian, and a labour leader. Those of the second grade are mostly younger, promising scientific or professional men.

It is clear that while all these three methods yield nearly the same results with heads of medium size, those of Pelletier and of Beddoe continue roughly parallel as one advances to greater sizes, while P. and L. drops rapidly behind. And, as I have shown in the earlier part of this paper, the fault must lie in P. and L., and not in the two other methods of procedure, which so far have a distinct advantage.

When we come to the comparison of the two survivors, we find that both of them attain as fair a degree of accuracy, or rather of approximation, as can reasonably be expected, but that Mme. Pelletier's plan has the advantage in simplicity of arithmetic, Beddoe's in ease and simplicity of measurement and apparatus ; the former may, therefore, answer better for the museum or the school of anthropology, but it may be claimed for the latter that it is the better for general use, for what may be called field-work, and for the rapid collection of valuable material. One may be better adapted than the other to particular types of head-form ; and here again I am disposed to think that my own would be found to do justice to more of such types than would any diametrical plan, but I must confess inability to support this opinion by distinct proof.

In the article in *L'Anthropologie* I have applied this method to the testing of current opinions as to the connexion of intellectual ability with largeness of brain ; and I have come to a definite conclusion on the subject. There need be no doubt that there is a strong correlation between the two ; and it may be observed that my more recent observations, just now quoted, point in the same direction,

there being a regular gradation in size from the series of nine men of intellectual distinction, through those believed to be of second rate, and the upper-class Yorkshiremen, down to the ordinary Westridingers. The rules laid down by Topinard remain unassailable. Intellectual distinction is generally the concomitant of largeness of brain, though there are numerous exceptions: large, tall, and robust men also frequently have large heads, and perhaps large brains; but an inordinate enlargement is apt to be accompanied by some degree of morbidity or vulnerability.

REPLY TO PROFESSOR PEARSON'S ARTICLE IN "BIOMETRIKA."

Professor Pearson has courteously favoured me with a copy of a paper of his, reprinted from *Biometrika*, which is mainly a hostile criticism of my scheme for the estimation of skull-capacity from circumferential measures, and of the methods used in my paper, "Sur l'évaluation et la signification de la capacité crânienne," in *L'Anthropologie*; the paper which precedes this reply he had not seen. The objects of the former paper were:—

1. To propound a method of estimating the capacity of the living head from peripheral measurements.
2. As a preliminary thereto, to show that a similar and reasonably good method of measuring the dead skull was practicable.
3. To point out a defect in principle in Pearson and Lee's diametral methods, resulting in the under-estimate of large and, to a less degree, the over-estimate of small skulls.
4. To show the great importance, at least in a certain number of crania, of variations in thickness of bone, which Pearson and Lee appeared to undervalue, but which were a serious drawback to accuracy of estimation, whether by their methods or mine.
5. To recommend the Inion as an aid to measurement and estimation of capacity.
6. To investigate once more the correlation of intellect and capacity, in which I was a believer.

Now all these points seemed to be objectionable to Professor Pearson and his school. I may have somewhat misunderstood him as to the first and second; anyhow, he now says that "there is absolutely no reason why the product of three cranial circumferences should not be taken as a basis," etc.; and he has himself produced a scheme for a circumferential estimate, using, however, the opisthion rather than the inion, so that the new plan could not be extended to the living head, about which I was chiefly concerned. It seems, however, to be as good as, or better than, Pearson and Lee's diametral plan.

On points 3 and 4 he does not seem to me to make any remarks of importance; and my position, I conceive, remains good.

On No. 6 he seems to me to be giving way a little; at least, he allows a small and not very marked correlation.

On No. 5, however, he makes quite a serious attack, basing himself on the statements, (a) that the inion is frequently undiscoverable, and (b) that its position is so variable as to make it useless. Yet with the assistance of Professor Thane, he himself found that the inion was more or less accurately determinable in 41 out of 43 male crania; in two only was it "vague" or "very doubtful." Surely that is not unsatisfactory for a point on the surface of an almost smooth ovoidal body. I have scarcely ever used it in female cases; but the infra-occipital line is about as long in them as in male ones; this Pearson's own figures show.

Having found a mean of 47 mm. in these 43 skulls for the lower occipital, he seems to think it sacrilegious in me to have suggested 50. After all, I only did so provisionally; and latterly, after experimenting with $12\frac{1}{2}$ per cent., or $\frac{1}{8}$, of the sagittal arc, I have been using 13 per cent. The former would give 47 mm. in Dr. Macdonell's Whitechapel series, the latter 49. I recently got an average of 49.3 in a mediæval series of 11 males at Bristol, exactly 13 per cent.

Some other accusations which Professor Pearson brings against me are, I must needs confess, better founded. In one case, having copied out the necessary figures for computation in three Naqada skulls selected by Miss Fawcett, I afterwards mistook the ordinal number (1308) for the capacity (1218), and working from that basis, which happened to suit my case, went very far wrong. It is perhaps worth noting that my critics are not absolutely immaculate in copying their own figures. The capacities in this particular case are stated in Miss Fawcett's tables at 1218, 1498 and 1223, but elsewhere at 1217, 1497 and 1222—small errors, but confusing.

On a recalculation, with the revised Q (transverse arc), I find B^3 yields a mean of 1333 or + 20, and a mean error of 40, which is just within the limits of the personal equation of the measurers.

Another error, which ran through a good deal of my work, was the acceptance of Professor Pearson's (the German) transverse arc as equal to my own, which is Busk's and that of the older anthropometers, French and English. The former is in the so-called vertical line; mine, which I have always employed, runs from the centre of the earhole across the bregma, if I can make certain of it, or in any case not far behind. I ought of course to have remembered and allowed for the difference. On page 380 Pearson says, he "ought to have added at least 10 mm. to Miss Fawcett's Q"; though on the next page he allows a difference of .2-inch, or 5 mm. This last figure I believe to be nearly correct. I found a mean difference of 4.3 mm. in a random series of ten skulls, but in two hyperbrachykephals it was 0, owing to the widening out abaft the ear. I have made the necessary alteration in several places in the preceding paper; it is sometimes favourable to my argument, but sometimes otherwise. The horizontal plane is still, I believe unsettled: and the German understanding is far from being generally accepted.

Busk's plan of using the centre of the meatus seems to me better in regard to the measurement of radii, especially in the living subject, and it is easier in practice.

As for the unsatisfactoriness, hitherto, of ear-height measurements, see Dr. Lee's table on p. 246 of her memoir, where the Badeners are quoted (from the German Anthropological Catalogue) as showing a difference between ear-height and basial height of 19.10 mm. and the Bavarians of 13.03 mm! *Credat Judæus!* For these are really "allied races," a phrase frequently and incorrectly applied by Pearson and his disciples to the Bavarians and English. So far as the calvarium goes, excluding the face, the English are more alike to the Chinese than to the modern Bavarians.

On page 370 I am accused of "shirking the fact that Dr. Lee's series are sufficient but not satisfactory." Having re-read the passage, I consider them insufficient, and think they might have been made more satisfactory on a better basis; and so much the Professor himself appears now to see—else why his new circumferential formulæ?

After all, we are none of us infallible, not even Thus the Professor, in his "Chances of Death," i, 329, found Barnard Davis's means "far too small." Now, on the other hand, he has discovered that they are far too big (which they really are, as Welcker could have taught him). I have throughout treated them as such; but as the great Broca pointed out, that was a matter of less consequence than carefulness and uniformity of procedure.

I ought perhaps to notice a table (IX) of Pearson's in which he compares his results and mine on a series of 20 skulls taken from the Thesaurus, by a process of selection which he had devised, no doubt with the object of securing perfect fairness. The results he arrives at are remarkably bad for both of us, but worst for me (mean error, Beddoe 77, Pearson and Lee 70, Pearson G.F., 54). Now his system of selection inevitably led to the inclusion of the most interesting and curious skull in the collection, the modern Neanderthaloid, to which Davis devoted several pages of the Thesaurus, and in which I had already pointed out the weakness of my formula, due chiefly to the thickness and ruggedness of the calvarium. If this one skull were eliminated, the tables would be somewhat turned, and the mean errors would be:

Beddoe 59, Pearson and Lee 69, G.F. 55.

The Professor's other tables show varying results, but on the whole indicate the possibility of his doing what he once scouted the possibility of doing, viz., producing a peripheral formula much better than P. and L., and better than mine for museum work, for which however I doubt his ever surpassing Manouvrier's plan in accuracy, or Welcker's in convenience.

On page 285 of my paper, "L'Evaluation et signification, etc.," I state that I am tolerably certain, after study of the available facts, that the mean capacity of the male English skull is somewhere near 1500, tacitly referring here, as elsewhere, to the standard of Flower.

On this Professor Pearson rather scornfully remarks, "As Dr. Beddoe does not

know the mean value of C, he guesses it. . . . This is the type of guesswork which has hitherto passed for science in anthropometry." Now the Professor surely ought to know that it is impossible to attain certainty on this point. He seems to think he can do so by attributing infallibility to the measurements of one or other of his helpers. But Miss Fawcett, to whom surely he ought to listen, shows in some passages, one of which at least is familiar to him, how impossible it is for two or more observers, even practised ones, to coincide in their measurements. And Dr. Macdonell follows her lead (pp. 205-6 of his paper), and proceeds in some cases to guess in the most irreligious and unscientific manner, quite common-sensibly.

In this case I had to deal with quantities for the value of which there is not and indeed perhaps can hardly ever be, a sufficient amount of evidence such as Pearson desiderates. I did not make my "guess" without full consideration of the work of Boyd, Peacock, and others, which, however, being generally incomparable *inter se*, could not, I thought, be advantageously put into regular form, even if I had had space to discuss them. My crime is that, having to fix a standard capacity for the purposes of my work on the living head, I put it at somewhere near 1500 c.c.

Now Sir W. Turner's Scottish skulls give, according to Dr. Macdonell, an average capacity of 1496, which seems pretty close to 1500; and 1477, Dr. M.'s own average for the Whitechapel find, is not very far off. Pearson himself ("Chances of Death," i, 330) put the mean of these same Whitechapelers, or of 26 of them, at 1,522.

$$\frac{1522 + 1477}{2} = 1499.5. \quad \text{Q.E.D.}$$

Seriously, I remain tolerably sure that on Flower's system, the mean capacity of the adult male English skull is not far below 1500 c.c. Pearson and Lee (pp. 250 *seq.*) put the capacity of males at the British Association meetings at 1495; but this estimate is the result of much random sampling and guesswork, and is probably too small *for the class*.

I am charged also with neglecting to consider the obvious fact (which Pearson claims as a discovery for Dr. Lee), that it is needful, in order to solve the intelligence-capacity problem, "to keep within one fairly equally nourished class." Thus he carefully ignores the fact that in my first paper ("L'Evaluation," etc.) I gave the measurements or estimated capacity of 100 Englishmen and 30 Scotchmen of the upper class, and subsequently drew attention (p. 287) to the superiority thereto of my "distinguished" category, a superiority amounting, by my estimate, to not less than 76 and 49 c.c. respectively. Not that all my distinguished men were porphyrogeneti!

My change of formula in passing from the dead to the living seems to puzzle my critic strangely. I must repeat that though it (the former one) has already been found useful (as by Professor Ruggieri and others) in cases where Manouvrier's plan is unavailable from any cause, I never expected it to be of great use. I simply devised it in order to test the suitability of peripheral

measures for the purpose, before proceeding to frame a plan for the living head, where a new formula is really needed. As for my having taken 50 keph-ind for the starting point, of which he complains; that was done with a view of securing an addition of 9 per cent. in the case of 80 index, and .03 more or less for every one of index above or below, thus bringing about, as I believe, an estimate of nearly 1500 c.c. in the average head.

I should like, however, at the risk of being tedious, to cite a few applications of our different formulæ to skulls belonging, so to speak, to my opponent's battalions, to carry on the contest on his own ground. I have increased Fawcett and Macdonell's Q by 5 to make my own, and have subtracted 13 per cent. from their sagittal arc to make my nasio-inial one. The deduction in the latter case varies from 44 to 51.

Among the Naqada, I have tested all the really available hyperdolicho males and the one brachy male that I could find. The results are:—

	P. and L. (N.)	G.F.	B.
8 Hyperdolichos, Total Errors ... {	+67	+257	+231
	—252	—60	—135
Brachykephal, Total Errors ...	+62	+18	+22
Total Mean... ..	—13.6	+23	+13
Mean Error	42	38	42
Extent of Error	207	130	150

Here G. F. is slightly the best. The compensation is injurious to B. in the brachy, and somewhat excessive in the hyperdolichos. Be it remembered that P. and L. (N) was especially devised to suit the Naqada.

Now for the Whitechapel English! If I knew which of Pearson's numerous formulæ he would prefer, I would use it: as it is, I employ his ordinary P. and L. and the 10 bis (00037 P + 321.16) which he seems to fancy as an interracial one; if he has calculated a special English formula, I do not know it.

I find

MEANS OF WHITECHAPEL MALES.

	Cap.	Predictions.			
		Do P. and L.	Do. 10 bis.	Do. G.F.	Do. B3.
Whole Series	1477	1433 (—44)	1448 (—29)	1448 (—29)	1469 (—8)
6 Extreme Dolichos	1481	1423 (—58)	1456 (—30)	1483 (+6)	1489 (+8)
Mean Error	—	63	46	47	50
3 Brachys	1500	1440 (—60)	1462 (—38)	1452 (—48)	1519 (+19)
Mean Error	—	72	64	54	23

					Cap.	Predictions.			
						Do P. and L.	Do. 10 bis.	Do. G.F.	Do. B. 3.
10 Selected ¹	...	...	...	1456	1409 (−47)	1428 (−28)	1430 (−26)	1446 (−10)
Mean Error	...	...	...	—	53	40	47	44
10 Big, over 1600...	...	...	...	1670	1538 (−132)	1564 (−106)	1602 (−68)	1654 (−16)
Mean Error	...	...	...	—	132	109	80	47
10 Small, 1400 and —	...	...	...	1357	1374 (+17)	1385 (+80)	1387 (+30)	1380 (+23)
Mean Error	...	...	...	—	25·2	37·8	35·3	44·7
Difference ²...	...	...	...	313	162 (!)	175	215	274

Here all the formulæ, except mine, fail to keep pace with the advancing capacity of the larger skull. This is due to their large constants, which however help to equalise the mean errors.

No one who may take the trouble to look at these figures and to consider them without prejudice, can fail to put B. 3 at the top, and P. and L. at the bottom of the scale. And he would probably give Pearson's G.F. (a formula based on circumferences) the second place in the class. No doubt B. 3 could be further improved; my compensations are perhaps excessive and too uniform. Of course, there is no true correlation between brachycephaly and capacity. The real question is, however, whether, capacity being equal, there is any connexion between dolichokephaly and a large total of diametral and of peripheral measurements. I think the Table V, in my French paper, goes some way towards proving it. Manouvrier and Welcker both make large allowances for brachycephals on that ground; and Welcker's are quite as large as mine.

If Professor Pearson had taken the trouble to consider my living-process, instead of conventionally ruling it out of order as having no mathematical basis, he would have seen that the doubts about the *mean* thickness of integument, which so much lessen the value of his process, are quite irrelevant as objections to mine, which is not, like his, based on a guess as to the size of the skull, but on an induction as to its average content. The *variations* of thickness in individuals affect both diametral and peripheral measures, the former at least as much as the latter. As for the hair, Professor Pearson probably does not mean to be taken seriously in his proposed census of baldheads. My friend Topinard's objection was theoretical; with further practice the Professor would find the difficulty lessen. It

¹ The first ten I could find free from any depreciatory remarks of Professor Thane's viz., Nos. 7, 33, 60, 62, 79, 120, 123, 138, 145, 147.

² The brachys are all I could find. Of the six extreme dolichos four are real hyperdolichos and the k.i. in the others does not exceed 71.

occurs chiefly, of course, in the horizontal circumference; and yet Lebon, and Welcker, and John Ranke, all tried a plan of estimation based on that alone, and did not find it unworkable. All the originality I can hope to claim lies in the use of the sagittal curve, in which the hair offers comparatively little impediment.

Professor Pearson winds up his paper with a very interesting account of the examination and measurement of the head of Jeremy Bentham. There were difficulties to be overcome in measuring what is neither a dry skull nor a living head; but these appear to have been fairly surmounted. The inion is placed remarkably high, a circumstance making the subject an unfavourable one for my procedure; but after making all the allowances mentioned by Pearson, and one more which the photographs indicate, viz.,—the presence of senile degeneration in a man of 85 years, the fact remains that Bentham, by my or indeed any estimate had, as Pearson says, a head of mediocre capacity. Pearson seems to make a great point of this. To me it is only one more exception to the general rule: 4 out of my 60 superior men have heads which, by my estimate, are below the mean of English capacity; and 3 of these 4 are distinctly men of mark; but, after all, they are only 4 out of 60, and of the whole 60, 45 surpassed the means which I found for the upper classes of England and Scotland respectively, while only 15, of whom 7 were Englishmen and 8 Scotchmen, fell below those means.

THE WIRADYURI AND OTHER LANGUAGES OF NEW SOUTH WALES.

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SYNOPSIS.—Introductory.—Orthography.—The Wiradyuri Language.—The Burreba-burreba Language.—The Ngunawal Language.—Vocabulary of Wiradyuri Words.—Vocabulary of Ngunawal Words.

THE native tribes speaking the Wiradyuri language occupy an immense region in the central and southern portions of New South Wales. For their eastern and northern boundaries the reader is referred to the map accompanying my paper to the American Philosophical Society in 1898.¹ The western boundary is shown on the map with my article to the Royal Society of New South Wales the same year.² Their southern limit is represented on the map attached to a paper I transmitted to the Anthropological Society at Washington in 1898.³ The maps referred to were prepared primarily to mark out the boundaries of the social organisation and system of marriage and descent prevailing in the Wiradyuri community, but will also serve to indicate the geographic range of their language.

The Wiradyuri language is spoken over a greater extent of territory than any other tongue in New South Wales, and the object of the present monograph is to furnish a short outline of its grammatical structure. I have included a brief notice of the Burreba-burreba language, which adjoins the Wiradyuri on the west. A cursory outline is also given of the language of the Ngunawal tribe, which bounds the Wiradyuri on a portion of the east. The Kamilaroi tribes, whose language I recently reported to this Institute,⁴ adjoin the Wiradyuri on the north.

In all the languages treated in this article, in every part of speech subject to inflexion, there are double forms of the first person, of the dual and plural, similar in character to what have been reported from many islands in Polynesia and Melanesia, and the tribes of North America. Separate forms for "we two," and "he and I," were observed by Rev. James Günther among the pronouns of the

¹ "Initiation Ceremonies of Australian Tribes," *Proc. Amer. Philos. Soc.*, vol. xxxvi, pp. 54-73, map.

² "The Group Divisions and Initiation Ceremonies of the Bar-Kunjee Tribes," *Journ. Roy. Soc. N.S. Wales*, vol. xxxii, pp. 240-250, map. That map includes with the Wiradyuri, the territory of the Burreba-burreba tribe, because their initiation ceremonies and marriage laws are the same.

³ "The Victorian Aborigines: their Initiation Ceremonies and Divisional Systems," *American Anthropologist*, vol. xi, pp. 325-343, map.

⁴ "Languages of the Kamilaroi and Other Tribes of New South Wales," *Journ. Anthropol. Inst.*, vol. xxxiii, p. 259.

Wiradyuri natives at Wellington, New South Wales,¹ but as he does not mention anything of the kind in the plural, we may conclude that he did not observe it.

The materials from which this paper has been prepared have been gathered by me while travelling through various parts of the Wiradyuri country, for the purpose of visiting and interviewing the old native men and women who still speak the native tongue, from whom I noted down all the information herein reproduced. When the difficulties encountered in obtaining the grammar of any language which is purely colloquial are taken into consideration, I feel sure that all necessary allowances will be made for the imperfections of my work.

The initiation ceremonies of the Wiradyuri tribes, which are of a highly interesting character, have been fully described by me in contributions to several societies and other learned institutions.²

It will be as well to state that in 1892, Dr. J. Fraser, from the MSS. of the late Rev. James Günther, published some grammatical rules and a vocabulary of the Wiradyuri language. This forms part of a volume entitled *An Australian Language* (Sydney, 1892), Appendix, pp. 56-120.

Mr. E. M. Curr published several vocabularies collected in different parts of the Wiradyuri territory.—*The Australian Race*, vol. iii, pp. 363-401.

ORTHOGRAPHY.

The system of orthoepy adopted is that recommended by the Royal Geographical Society, London, with the following qualifications :

Ng at the beginning of a word or syllable has a peculiar sound, which I have previously illustrated.³ At the end of a syllable or word, it has substantially the sound of *ng* in "sing."

Dh and *nh* have nearly the sound of *th* in "that," with a slight initial sound of the *d* or *n* as the case may be.

Ty and *dy* at the commencement of a word or syllable, as *dyirril* (a spear), has nearly the sound of *j*. At the end of a word, as *gillaty* (to-day), *ty* or *dy* is pronounced nearly as *tch* in the word "batch," but omitting the final hissing sound.

W always commences a syllable or word, and has its ordinary sound. *G* is hard in all cases. *R* has a rough trilled sound, as in "hurrah!"

The sound of the Spanish *ñ* is frequent. At the commencement of a syllable or word I have given it as *ny*, but when terminating a word I have used the Spanish letter.

¹ "An Australian Language" (Sydney, 1892), *Appendix*, p. 60.

² "The Burbung of the Wiradyuri Tribes," *Journ. Anthropol. Inst.*, vol. xxv, pp. 295-318. *Ibid.*, vol. xxvi, pp. 272-285. "The Initiation Ceremonies of the Aborigines of the Upper Lachlan," *Proc. Roy. Geog. Soc. Austr., Queensland Bch.*, vol. xi, pp. 167-169.

"The Burbung or Initiation Ceremonies of the Murrumbidgee Tribes," *Journ. Roy. Soc. N.S. Wales*, vol. xxxi, pp. 111-153.

"The Burbung of the Wiradhuri Tribes," *Proc. Roy. Soc. Queensland*, vol. xvi, pp. 35-38.

³ "The Aboriginal Languages of Victoria," *Journ. Roy. Soc. N.S. Wales*, vol. xxxvi, p. 76.

T is interchangeable with *d*; *p* with *b*; and *g* with *k* in most words where they are used.

As far as possible, vowels are unmarked, but in some instances, to avoid ambiguity, the long sound of *a*, *e* and *u* are indicated thus: â, ê, û.

In a few cases the short sound of *u* is marked *ũ*. *Y* at the beginning of a word has its ordinary consonant value.

THE WIRADYURI LANGUAGE.

Articles.

There are no articles, properly so-called, in the language. The demonstratives "this" and "that" do duty for our "a" and "the." If it be desired to definitely say that only *one* is meant, the numeral, *ngunbai*, is employed.

In all the sentences illustrating the cases of nouns and other parts of speech in this paper, the demonstratives are omitted. A native would say, "Man [that over yonder] beat child [this in front]," the proper demonstratives being inserted where illustrated by the brackets.

Nouns.

Number.—There are three numbers, singular, dual and plural. *Wamboin*, a kangaroo. *Wamboinbula* a couple of kangaroos. *Wamboingirbang*, several kangaroos.

Gender.—In the human family different words are used, as *mên* or *gibir*, a man; *bulládyeru* or *inar*, a woman; *birrengang*, a boy; *inargang*, a young girl; *yiramurung*, a youth; *megai*, a maiden; *burai*, a child.

Among animals, words are used signifying "male" and "female" respectively. *Wille bidyur*, a buck opossum; *wille gunal*, a doe opossum. *Nguruñ burramai*, a hen emu; *nguruñ bidyur*, a cock emu.

Case.—The cases are the nominative, nominative-agent, genitive, accusative, instrumental dative and ablative.

The nominative simply names the person or thing under attention, as, *mirri* or *burumain*, a dog; *burrandang*, a native-bear; *wille* or *womburan*, an opossum; *wagan*, a crow; *bũlgang* or *bũrgan*, a boomerang.

The nominative-agent requires a suffix to the noun, as, *gibirru womburan dhé*, a man an opossum ate. *Bulládyerudu dhurung bumé*, a woman a snake struck (or killed). *Inarru wille dharalgiri*, a woman an opossum will eat. *Burrandangu gurriil dhara*, a native-bear leaves is eating. *Mirridu wille buddhe*, a dog an opossum bit.

Genitive.—*Méngu bulgang*, a man's boomerang. *Bulládyerugu kunne*, a woman's yamstick. *Burrandangu bullung*, a native-bear's head.

Dative.—*Dhurragu*, to the creek (*dhurrag*). *Ngurangu*, to the camp (*ngurang*).

Ablative.—*Dhurrandyi*, from the creek; *ngurandyi*, from the camp. In this case, and also in the dative, the final *g* of both words is omitted before applying the suffix.

The accusative is the same as the simple nominative, as will be seen by the examples given under the nominative-agent.

Instrumental.—When an instrument is the remote object of the verb, the accusative remains unchanged, but the instrumental case takes the same suffix as the nominative-agent; thus, *méndu wagan búrgandu bume*, the man hit a crow with a boomerang. *Inarru burumain kunnedu bangabe*, the woman cut a dog with a yamstick.

In the above examples, as well as in the sentences illustrating the nominative-agent, it will be seen that the agent suffix has euphonic changes according to the termination of the word it is attached to. This may be said of the suffixes in all the cases of nouns and adjectives.

Adjectives.

Adjectives take the same inflexions for number and case as the nouns they qualify, and are placed after them. They are without gender.

Womboin munun, a kangaroo large. *Womboinbula mununbula*, a pair of large kangaroos. *Womboinmuddu mununmuddu*, several large kangaroos.

Burumaindu munundu womburan buddhe, a dog large an opossum bit. *Inarru bubadyallu burai bume*, a woman small a child beat.

Womboingu munungu dhun, a large kangaroo's tail.

A big waterhole, *dhá-u munun*. *Dhá-ugu munungu*, to a big waterhole. *Dhá-wadyi munundyi*, from a big waterhole.

Comparison.—*Nyila murrumbangbun-gan*, this is very good. *Nyilangai murrumbang wirrai*, that is not good. If the articles compared be equal in quality, a native would say, This is good—that is good, and so on.

Pronouns.

Pronouns are inflected for number and person, and comprise the nominative, possessive and objective cases, a few examples in each of which will be given. There are forms in the dual and plural to express the inclusion or exclusion of the person addressed.

Singular.

		Nominative.		Possessive.		Objective.
1st Person	I	<i>Ngadhu</i>	Mine	<i>Ngadyi</i>	Me	<i>Ngunnhal.</i>
2nd „	Thou	<i>Ngindu</i>	Thine	<i>Nginnu</i>	Thee	<i>Nginyal.</i>
3rd „	He	<i>Ngagwa</i>	His	<i>Ngagwaiula</i>	Him	<i>Ngunnungga.</i>

Dual.

1st Person	{ We, incl.	<i>Ngulli</i>	Ours, incl.	{ <i>Ngulliging</i>	Us, incl.	{ <i>Ngullinya.</i>
	{ We, excl.	<i>Ngulliguna</i>	Ours, excl.	{ <i>Ngulligingula</i>	Us, excl.	{ <i>Ngullinyuggu.</i>
2nd „	You	<i>Ngindubla</i>	Yours	<i>Nginnubulala</i>	You	<i>Nginyalbula.</i>
3rd „	They	<i>Ngagwainbula</i>	Theirs	<i>Ngagwabulagu</i>	Them	<i>Ngunnainbula.</i>

Plural.

1st Person	{ We, incl.	<i>Ngeani</i>	Ours, incl.	{ <i>Ngeaniging</i>	Us, incl.	{ <i>Ngeaninyagu.</i>
	{ We excl.	<i>Ngeaniguna</i>	Ours, excl.	{ <i>Ngeaniginguna</i>	Us, excl.	{ <i>Ngeaninyaguna</i>
2nd „	You	<i>Ngindugir</i>	Yours	<i>Nginnugir</i>	You	<i>Nginyalgir</i>
3rd „	They	<i>Ngagwainguler</i>	Theirs	<i>Ngagwagulaia</i>	Them	<i>Ngunnagulella.</i>

There are other forms of the objective case meaning "from me," "with me," "towards me," etc., which have numerous modifications.

The extended forms of the pronouns given in the above table are not much used as separate words, except in answer to interrogatives, or assertively. *Ngulliguna* might, for example, be given in answer to the question, "Who killed the kangaroo?" "Whose boomerang is this?" might elicit the reply, *Ngaddyi*.

In common conversation, however, the pronominal affixes are employed.

The third personal pronouns have several forms and are subject to much variation, depending upon the position of the parties referred to. Many of them are practically demonstratives.

Interrogatives.—Who, *ngandli*? Who (agent), *nganduwa*? Who (dual), *nganduwambula*? Who (plural), *nganduwandugir*? Who for, *ngandigula*? Whose is this, *ngangunginna*? *Nganduga* is equivalent to "I wonder who?" or "I don't know who." Who from, *ngangundiburrami*? What, *minyang*? What is that, *minyawanna*? What for, *minyangula*? What from, *minyalli*? How many (what number), *minyanggulmañ*?

Demonstratives.—The following are a few examples:—This, *nginna*. These (dual), *nginnabula*. This other one, *nginnagwal*. From this, *nginnalidhi*. Belonging to this, *nginnagula*. With this, *nginnadhurai*. That, *gunnula*. That other one, *gunniloagwal*. That yonder, *gunnainbirra*. A native will frequently state the location of an article by its compass direction from a particular tree or other well-known spot.

These demonstratives are very numerous—many of them being used as pronouns of the third person, and are declined for number, person, and case. They also vary according to the position of the object referred to in regard to the speaker, and likewise change with the relative position of the object to the person addressed.

In all parts of aboriginal speech, words are occasionally met with so closely alike in pronunciation that it is almost impossible for any one but a native to detect the difference.

Verbs.

The moods are the indicative, imperative, conditional, and infinitive. The verb stem and a contraction of the necessary pronouns are incorporated, and the words thus formed are used in the conjugation. There are, however, modifications of the affixed particles in the past and future tenses to express differences in time.

In the following conjugation of the verb "to beat" the present tense is given in full. In the past and future tenses, one example in the first person singular is thought sufficient, because any required person and number in each tense can be obtained by following the directions given in the text.

Indicative Mood—Present Tense.

Singular ... {	1st Person	...	I beat	...	...	<i>Bumurradhu.</i>
	2nd	„	...	Thou beatest	...	<i>Bumurrandu.</i>
	3rd	„	...	He beats	...	<i>Bumurragwa.</i>

Dual	...	1st Person	...	{ We, incl., beat	...	<i>Bumurrali.</i>
				{ We, excl., beat	...	<i>Bumurraliguna.</i>
		2nd	"	You beat	...	<i>Bumurrandubla.</i>
Plural	...	3rd	"	They beat	...	<i>Bumurragwainbula.</i>
		1st	"	{ We, incl., beat	...	<i>Bumurrani.</i>
				{ We, excl., beat	...	<i>Bumurraniguna.</i>
	...	2nd	"	You beat	...	<i>Bumurrandugir.</i>
		3rd	"	They beat	...	<i>Bumurragwainguler.</i>

Past Tense.

1st Person Singular,	{	I beat just now	...	...	...	<i>Bumulbéndhu.</i>
		I beat this morning	...	...	...	<i>Bumulngurrindhu.</i>
		I beat yesterday	...	...	...	<i>Bumulgwandhu.</i>
		I beat, indefinite	...	...	...	<i>Bumédhu.</i>
		I beat long ago	...	...	...	<i>Bumulgridyu.</i>

Dhu, softened to *dyu* in some cases, is a contraction of *ngadhu*.

Future Tense.

1st Person Singular,	{	I will beat, indefinite	...	...	...	<i>Bumulgiridyu.</i>
		I will beat, soon	...	...	...	<i>Bumulyawagiridyu.</i>
		I will beat in the morning	...	...	...	<i>Bumulngurrigiridhu.</i>

Owing to the several inflections of the verb in the past and future tenses, for immediate, proximate, and more or less remote times of the performance of the action,¹ it is often found convenient, especially when speaking in the dual or plural, to prefix a complete pronoun from the table of pronouns. Thus, instead of saying, *Bumulbénli*, a native frequently expresses it, *Ngulli bumulbén*. Again, instead of saying, *Bumulgiriniguna*, he would use, *Ngeaniguna bumulgiri*. This leaves the termination of the verb freer for the numerous inflexions.

Imperative Mood.

Singular	...	Beat thou	...	...	...	<i>Buma.</i>
Dual	...	Beat you	...	...	...	<i>Bumandubla.</i>
Plural	...	Beat you	...	...	...	<i>Bumandugir.</i>

Conditional Mood.

Perhaps I will beat. *Yama bumulgiridyu.*

Infinitive Mood.

To beat *Bumulli.*

Reflexive.

There is a reflex form of the verb, as when one does anything to himself:

I am beating myself *Bumängadyilliñdyu.*

¹ Compare with my "Yookumbil Language," *Queensland Geog. Journ.*, vol. xvii, pp. 63-67.

Reciprocal.

The dual and plural contain a reciprocal form of the verb, as where two or more persons beat each other:

We, (dual excl.,) are beating each other *Ngulliguna bumullén.*

We, (pl. excl.,) are beating each other *Ngeaniguna bumullén.*

There is no passive voice. The sentence, A woman was bitten by a dog, is expressed by, A dog bit a woman.

The prohibitive or negative in all the moods, tenses, and numbers is obtained by using the word *Kurria* with the verb, thus: *Kurria buma*, beat not. *Kurria bumulgiridyu*, I will not beat. Another form is used where there is uncertainty, as, *Wirraigurra bumulgiridyu*, which expresses the meaning, "I don't think I will beat," or, "Perhaps I will not."

Murrung nginyadhu has the meaning of "I am well," and may be called a substitute for our verb "to be." By incorporating *yalu* with this expression, it makes it more emphatic, as, *Yalu murrung nginyadhu*, "Really I am well." Any adjective describing a human attribute may be taken as a predicate, as, good, bad, strong, sleepy, and employed with the modifications of the word *nginya*.

Prepositions.

A number of prepositions are independent words, as: Behind, *yabbungura*. In front, *willidya*. Across, *dargin*. Around, *waiangadha*. Outside, or, on the other side, *ngunnungura*. Inside, *muguma*. This side, *nginnungaradha*. *Billaga ngunnungura*, the other side of the creek. On the right, *bumalgala*. On the left, *mirrangur*. Ahead, *banganañ*. In the rear, *ngunnagangura*.

Frequently the verb includes the meaning of a preposition, as in the following examples:

Ngadhu ngadyén dyirramuddyi gullegiri, I that hill go-up-will. *Ngadhu dyila dyirramuddyi birrawagiri*, I that hill go-down-will. *Ngadhu ngidyi gigulle waian-gugiri*, I that tree go-round-will. *Ngeani birgudyi wurungiri*, We (pl. incl.) the scrub through-will-go. *Ngulliguna billadyi errugiri*, We (dual excl.) the creek will-cross. *Ngadhu dyirramudyi ngagungurgu gulleamurrigiri*, I will climb over the hill.

Adverbs.

The following are a few of the adverbs, some of which are inflected for number, case, and tense: *Wirrai*, no. *Ngaiin*, yes. *Yandhal*, now. *Dhallan*, soon. *Yére*, to-day. *Ngurrungal*, the morning. *Yéregwala*, yesterday. *Ngunnigunala*, day before yesterday. *Ngunnungalágal*, day after to-morrow. *Murradhūlbul*, long ago. *Buruandhangga*, night-time.

Here (now), *nginna*. Here (was), *nginni*. This way, *dhain*. Farther away, *ngunna*. Still farther, *ngunneng*. A good way off, *ngunnagunalla*. There in the rear, *ngunnagangura*. These pronominal adverbs, like the demonstrative pronouns, are very numerous and also include the points of the compass.

How, *widdyallangalu*? How thou, *widdyawandu*? How you (dual), *widdya-wandubla*? How you (plural), *widdyawandugir*? How obtained, *widdyunggurrunda burramai*? *Widdyunggawa* has the meaning of "when?"

Where is it, *dhagawana*? Where (having the meaning of "which one,") *dha-gala*? Where art thou, *dhagawandu*? Where are you (dual), *dhagawandubla*? Where are you (plural), *dhagawandugir*? From where, *dhadyindaburramai*? Where art thou from, *dhadyigalliwandu*? Where is the camp, *dhagawa ngurung*?

Interjections.

Yah! calling attention. *Wai!* look out. *Wah!* *ngarrarbang!* *Ah!* poor fellow! Listen, *winnangga!* Any vocative can be inflexed for number.

Numerals.

Ngünbai, one; *bulla*, two.

THE BURREBA-BURREBA LANGUAGE.

The Burreba-burreba is spoken from about Deniliquin to Moulamein, and from the latter southerly towards the Murray river. The following is a sketch of its grammatical structure. A dialect of this language, called Burêba, is spoken on the Murray river, near Swan Hill.

Nouns.

Number.—There are the singular, dual, and plural numbers. *Wille*, an opossum; *willebulet*, a pair of opossums; *willebarak*, or *willeguli*, several opossums.

Gender.—*Wuthu*, a man; *léurk*, a woman; *bangga*, a boy; *kurregárk*, a girl; *buban*, a child of either sex; *wuthuginbal*, means a man and his wife. The gender of mammals and birds is marked by adding *mamuk* for male, and *babuk* for female; thus, *guré mamuk*, a buck kangaroo; *guré babak*, a doe kangaroo.

Case.—The language has the nominative, nominative-agent, genitive, accusative, instrumental, dative and ablative cases. In the nominative, there is no change in the noun, except when it is the subject of a transitive verb, and then it requires the agent-suffix; as, *Wuthung wirrungan bārdumin*, a man a dog beat; *léuru wirringal kūrigin*, a woman a perch caught; *wirrunganu guré bāndin*, a dog a kangaroo bit.

In the possessive case, the name of the proprietor and of the property each take a suffix, as, *Wuthunggety wanuk*, a man's boomerang; *léurgety lārnu*, a woman's camp; *wirrungangety birkuk*, a dog's tail.

Instrumental.—This is the same as the nominative-agent, thus, *Ngaty guré duggin wanu*, I a kangaroo hit with a boomerang.

Dative.—*lārngak*, to a camp. *Ablative.*—*wuthunyu*, from a man. The accusative is the same as the nominative.

Adjectives.

Adjectives follow the nouns and take similar declensions.

Number.—*Wuthu kurumbirt*, a man large. *Wuthubulet kurumbirtbulet*, a couple of big men. *Wuthubarak kurumbirtbarak*, several big men.

Nominative-agent.—*Wuthung kurumbirru wille burdumin*, a large man an opossum killed.

Possessive.—*Wuthunggety kurumbirungety wanuk*, a big man's boomerang.

Ablative.—*Wuthunzung kurumbirung*, from a big man.

The comparison of adjectives follows rules similar to those explained in my article on "The Gundungurra Language."¹

It will be observed that there are modifications in the case-endings of nouns and adjectives, depending upon the termination of the word declined. Moreover, these suffixes for number and case are applied to the simple nominative—not the nominative-agent.

Pronouns.

Pronouns take inflexion for number, person and case. There are two forms in the first person of the dual and plural—one in which the person or persons addressed are included with the speaker, and another in which they are exclusive of the speaker; these are marked "incl." and "excl." in the following table:

Singular.

1st Person	I	<i>Ngaty</i>	...	Mine	<i>yekaiuk.</i>
2nd "	Thou	<i>Ngin</i>	...	Thine	<i>Ngindaiuk.</i>
3rd "	He	<i>Malu</i>	...	His	<i>Maigungety.</i>

Dual.

1st Person	{ We, incl.	<i>Ngal</i>	...	Ours, incl.	<i>Ngallaiuk.</i>
	{ We, excl.	<i>Ngalung</i>	...	Ours, excl.	<i>Ngallunguk.</i>
2nd "	You	<i>Ngulen</i>	...	Yours	<i>Ngulaiuk.</i>
3rd "	They	<i>Malubulak</i>	...	Theirs	<i>Magaty-bulagaty.</i>

Plural.

1st Person	{ We, incl.	<i>Yangur</i>	...	Ours, incl.	<i>Yanguréuk.</i>
	{ We, excl.	<i>Yandang</i>	...	Ours, excl.	<i>Yandéuk.</i>
2nd "	You	<i>Ngât</i>	...	Yours	<i>Ngâteuk.</i>
3rd "	They	<i>Malugulik</i>	...	Theirs	<i>Ngugaty-guligaty.</i>

Interrogatives.—Who, *winyar*? (singular)—*winyarbula* (dual) and *winyartukuli* (plural). What, *nganyu*? which also has a dual and plural form.

Demonstratives.—This, *ginga*, which has a dual and plural suffix. *Malu*, that; *kila*, that near you. *Munya*, that farther away. *Kigety*, belonging to that. *Kigety-bulugety*, belonging to those two. *Kigety-guligety*, belonging to all those.

Verbs.

Verbs have the same tenses and moods as those of the Wiradyuri, as will be demonstrated in the conjugation of the verb "to beat." In the Burreba-burreba

¹ *Proc. Amer. Philos. Soc.*, Philadelphia, vol. xl, No. 167.

verb there are, however, no regular modifications of the past and future tenses, such meanings being expressed by separate words.

Active Voice—Indicative Mood.

Present Tense.

1st Person	I beat	...	...	...	...	<i>Ngaty tyilba.</i>
2nd	„	Thou beatest	<i>Ngin tyilba.</i>
3rd	„	He beats	<i>Malu tyilba.</i>

Past Tense.

1st Person	I beat	<i>Ngaty tyilbin.</i>
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Future Tense.

1st Person	I will beat	<i>Ngaty tyilbén.</i>
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Imperative Mood.

Beat, *tyilbak*. Beat not, *burreba tyilbak*.

Conditional Mood.

Perhaps I will beat, *Ngaty tyilbén mumbän*.

In all the foregoing examples, the remaining persons and numbers of the verb can be supplied by the table of pronouns.

Middle Voice—Indicative Mood.

Present Tense.

Singular. I am beating myself. *Tyilbanyungbenggat*.

The conjugation can be continued through all the moods, tenses, etc., the same as in the indicative mood.

Reciprocal.

We two (incl.) are beating each other, *Tyilptyerrungat*.

We all (incl.) are beating each other, *Tyilptyerrungungur*.

There are forms for all the persons and tenses.

Adverbs.

Yes, *ngungwi*. No, *burreba*. To-day, *gillaty*. To-morrow, *perbur*. Yesterday, *dyelli-dyellik*. By and bye, *gillandam*. Some time ago, *gillenadya*. Long ago, *yagaluk-wanda*. Where, *windyella*? (singular); *windyellaubul*? (dual); *windyellat*? (plural). How many, *nyabur*? Here, *kingga*. There, *nyua*.

Numerals.

One, *kaiapmin*. Two, *buletya*.

INITIATION CEREMONIES AND MARRIAGE LAWS.

The initiation ceremonies of the Burreba-burreba are the same in all essential respects as those of the Wiradyuri tribes, which I have described in detail elsewhere.¹ The social organisation is also similar to the Wiradyuri, comprising two phratries, each of which is subdivided into two sections, as exemplified in the following synopsis:—

Phratry.	A man.	Marries.	Sons and Daughters.
A ...	{ <i>Murri</i>	... <i>Ippatha</i>	... <i>Umbi</i> and <i>Butha</i> .
	{ <i>Kubbi</i>	... <i>Butha</i>	... <i>Ippai</i> and <i>Ippatha</i> .
B ...	{ <i>Ippai</i>	... <i>Matha</i>	... <i>Kubbi</i> and <i>Kubbitha</i> .
	{ <i>Umbi</i>	... <i>Kubbitha</i>	... <i>Murri</i> and <i>Matha</i> .

Although marriages generally follow the above rules, yet in certain cases *Murri* can marry *Butha*, and *Kubbi* may take *Ippatha* as his spouse—a similar liberty being allowed the men of phratry B. Again, where there is no objection arising from nearness of kin, a *Murri* man may marry a *Matha* woman, but her totem must be different from his, and she must belong to a distant family. This applies to the men of every section. By the strict letters of the foregoing table, it would appear that the child of a brother can marry the child of a sister, but this is rigorously forbidden—the table being construed to mean that a brother's child's child marries a sister's child's child.

Each phratry has attached to it a group of *totems*, consisting of animals and inanimate objects. Every man, woman, and child in the community has his particular totem, which is inherited from birth. For further information on this subject the reader is referred to numerous papers contributed by me to different scientific societies.

THE NGUNAWAL LANGUAGE.

The native tribes speaking the Ngunawal tongue occupy the country from Goulburn to Yass and Burrowa, extending southerly to Lake George and Goodradigbee.

In a contribution to the Anthropological Society at Washington in 1896, I described the Bunan ceremony,² an elaborate type of initiation practised by the Ngunawal in common with other communities. In 1900 I published an account of the *Kudsha*³ or *Kuddya*, an abridged form of inaugural ceremony which is likewise in force among the same people. The social organisation regulating marriage and descent, which I described in the last mentioned article,⁴ also applies to the Ngunawal.

¹ "The Bârbung, etc., of the Murrumbidgee Tribes," *Journ. Roy. Soc. N.S. Wales*, vol. xxxi, pp. 111–153.

² *American Anthropologist*, vol. ix, pp. 327–334, Plate VI.

³ *Journ. Roy. Soc. N.S. Wales*, vol. xxxiv, pp. 276–281.

⁴ *Ibid.*, op. 263–264.

The Ngunawal is one of an aggregate of tribes whose sacred songs I have learnt and published, with the accompanying music, in an article I communicated to the Royal Geographical Society of Queensland in 1901.¹ These are the first sacred songs of the Australian Aborigines which have ever been set to music.

Nouns.

Number.—Nouns have three numbers. *Mirri*, a dog; *mirribula*, a couple of dogs; *mirridyimma*, several dogs.

Gender.—*Bawal*, a man; *bullan*, a woman. Words for "male" and "female" distinguish the gender of animals, as, *gurabun muddun*, a bear, male; *gurabun dhuruk*, a bear, female.

Case.—The principal cases are the nominative, causative, instrumental, genitive, accusative, dative and ablative.

The nominative is the name of the subject at rest, and is without flexion.

The causative, or nominative-agent, represents the subject in action, as, *bullanga gudha ngubumuiñ*, a woman a child beat.

Instrumental.—*Bawalga burraingu nguburiñ dyuiña*, a man a wallaby killed with a spear. Here the instrument, spear, takes the same suffix as the causative. The wallaby, *burrai*, takes the genitive affix, as being the possessor or recipient of the killing.

Accusative.—Except in such instances as the wallaby in the last example, the accusative is the same as the nominative.

The genitive case is represented by an affix to the name of the property as well as to that of the owner, a peculiarity which I was the first to report² in Australian languages. *Bawalngu mirriwung*, a man's dog.

Every object over which ownership may be exercised can be declined for number and person, as under:—

Singular	1st Person	...	...	My dog (dog my)	...	<i>Mirridya</i> .
	2nd "	...	...	Thy dog	...	<i>Mirridyi</i> .
	3rd "	...	...	His dog	...	<i>Mirriwung</i> .

and so on through all the persons of the dual and plural.

If a couple or more articles be claimed, an infix is inserted between the noun root and the possessive affix, thus: *Mirribuladya*, dogs both mine; *mirridyimmadya*, dogs several mine.

Dative.—*Ngurani munnagai*, to the camp come.

Ablative.—*Ngurawurradyi yerribiwurri*, from the camp go away.

Adjectives.

Adjectives follow the qualified nouns, and are inflected in the same manner for number and case. *Buru mununmang*, a kangaroo large; *burubula mununbula*, a couple of large kangaroos; *burudyimma munundyimma*, several large kangaroos.

¹ "Aboriginal Songs at Initiation Ceremonies," *Queensland Geographical Journal*, vol. xvii, pp. 61-63.

² See my "Thurawal Language," *Journ. Roy. Soc. N.S. Wales*, vol. xxxv, p. 131.

Causative.—*Bawalga mununga mirri ngubuningga*, a man large a dog will beat. The other cases are also declined like the nouns. Frequently one of the affixes, both in number and case, is omitted—sometimes the affix of the noun, and in other instances that of the adjective, being thus eliminated, according to the euphony of the expression.

A predicative adjective becomes an intransitive verb, and is conjugated accordingly. An example in the singular will be sufficient:

Singular	{	1st Person	...	I am large	...	...	<i>Mununmangga.</i>
		2nd „	...	Thou art large	...	...	<i>Mununmandyi.</i>
		3rd „	...	He is large	...	...	<i>Mununmañ.</i>

Comparison of adjectives is effected by such expressions as, *Gudba ngunu*, *yeddhung nin*, bad this, good that. *Yeddhung madi ngunu*, this is very good.

Pronouns.

These are declined for number, person and case, but are without gender. They contain the inclusive and exclusive forms in the first person of the dual and plural:

Singular	{	1st Person	...	I	...	...	...	<i>Gulangga.</i>
		2nd „	...	Thou	...	...	...	<i>Gulandyi.</i>
		3rd „	...	He	...	...	...	<i>Dhanu.</i>

Examples in the dual and plural are omitted, as their terminations will appear in the conjugation of the verbs. The foregoing full forms of the pronouns are used chiefly in answer to a question. In ordinary conversation the pronominal suffixes to verbs, nouns and other parts of speech, supply their place.

Towards, or with, me, *gulangguia*. Away from me, *gulangguridyia*. Belonging to me, *gulangguia*. Myself, *mittimbaldya*, and so on. All these can be inflected for number and person.

Demonstratives.—These may be classed under different heads, of which the following are a few examples:

Position.—*Ngunu*, this, close. *Ngunubun*, this also. *Niñ*, that. *Niñwulu*, that only. *Wurranaguddha*, that, a little way off. *Warranandiwang*, that, farther still. *Muddhamaguwarri*, a long way off.

Direction.—*Ngunāga*, that (in rear of speaker). *Barunggo*, that (in front of speaker). *Ngunainbil*, that this side (of something). *Nguna-au*, that on other side (of something). *Gagurwarri*, that in the hollow. *Warrugunnawang*, that on the rising ground, or hill.

Size.—*Warranalang*, that large one. *Warranuggada*, that small one.

Possessive.—*Ningulangu*, belonging to that. *Warranalangu*, belonging to that large one. *Nidyulangu*, belonging to those two persons.

Number.—*Warranungulu*, those two. *Warradyimmilañ*, those several animals or things.

Person.—*Ngunadya*, this mine. *Ngunadyi*, this thine. *Ngunawung*, this his.

"This" and "that" in all the foregoing examples can also mean "here" and "there" according to the context.

Interrogatives.—Who, *ngunnaga*? Whose, *ngunnagangu*? Who from, *ngunnaganguridyi*? What, *minya*? What (did something), *minyaga*?

Verbs.

The verb has the usual moods and tenses, and is inflected throughout for number and person. In the first person of the dual and plural there is a variation in the affix to the verb to indicate the inclusion or exclusion of the person spoken to.

Indicative Mood—Present Tense.

Singular	{	1st Person	...	I beat	...	...	<i>Ngubumangga.</i>
		2nd "	...	Thou beatest	...	...	<i>Ngubumandyi.</i>
		3rd "	...	He beats	...	...	<i>Ngubumañ.</i>
Dual ...	{	1st Person	...	{ We, incl., beat We, excl., beat		...	<i>Ngubumanga.</i> <i>Ngubumangalu.</i>
		2nd "	...	You beat	...	...	<i>Ngubumanbu.</i>
		3rd "	...	They beat	...	...	<i>Ngubumanbula.</i>
Plural ...	{	1st Person	...	{ We, incl. beat, We, excl. beat,		...	<i>Ngubumanyin.</i> <i>Ngubumanyilla.</i>
		2nd "	...	You beat	...	...	<i>Ngubumanhu.</i>
		3rd "	...	They beat	...	...	<i>Ngubumandyula.</i>

Past Tense.

1st Person Singular,	{	I beat, indefinite	...	...	...	<i>Nguburingga.</i>
		I beat recently	...	...	...	<i>Ngubumwingga.</i>
		I beat going along	...	...	...	<i>Ngubunyirringga.</i>
		I beat long ago	...	...	...	<i>Nguburiangga.</i>

Future.

I will beat, indefinite	...	...	...	<i>Ngubuningga</i>
I will beat soon	...	...	...	<i>Ngubumunningga.</i>

The inflections extend through all the persons and numbers of the past and future tenses by means of the suffixed particles shown in the present tense.

Imperative.

Singular	...	Beat thou	...	...	...	<i>Ngubi.</i>
Dual	...	Beat you	...	...	...	<i>Ngubidyaiaw.</i>
Plural	...	Beat you	...	...	...	<i>Ngubidyaiianhu.</i>
Negative or prohibitive	...	Beat not	<i>Ngubimuga.</i>

Conditional Mood.

Perhaps I will beat	<i>Ngubuninggawundu.</i>
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Reflexive.

I am beating myself	<i>Ngubuwillimangga.</i>
I was beating myself	<i>Ngubuwilliringga.</i>
I will beat myself	...	...	...	<i>Ngubuwillingga.</i>

and so on for the other persons and numbers.

Imperative.—Beat thyself	<i>Ngubuwilli.</i>
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Reciprocal.

Dual	...	We, excl., beat each other	...	<i>Ngubuwillingalung.</i>
Plural	...	We, excl., beat each other	...	<i>Ngubuwillingilla.</i>

Imperative reciprocal.

Dual	...	Beat each other	...	...	<i>Ngubilliau.</i>
Plural	...	Beat each other	...	...	<i>Ngubillianhu.</i>

An infix, *muga*, between the stem of the verb and the termination, gives a negative meaning, as, *Ngubumugamangalu*, we, dual exclusive, did not beat.

There is no passive form of the verb, all sentences being in the active voice, thus, instead of saying, "A boomerang was thrown by the man," the phrase would be, "The man threw a boomerang."

The verb is inflected for the same number as the noun.

A kangaroo saw I, *buru nangurringga*.

A pair of kangaroos saw I, *burumbla nangurringbla*.

Several kangaroos saw I, *burulula nangurringdyula*.

Different shades of meaning are imparted to verbs by additions to the affixes:

I was eating going along, *dhaimballingjirimuingga*.

I beat before (some event), *ngubururingawung*.

I beat after (some event), *ngubullaringawung*.

I threw frequently, *yerrimbillidyingga*.

I was throwing alone, *yerrilimuingga*.

I am always beating, *ngubadyingga*.

Adverbs.

Yes, *ngi*. No, *gurragan*. Now, *yanggu*. Yesterday, *burranda*. By and by, *gangau*. Long ago, *nudyina*. Always, *bulu*.

How, *ngindyin*. How many, or what number, *wunnamalañ*. Where, *wūnda*. Certainly, *ganni*. Then, *yanbi*. Very or really, *madi*. Perhaps, *wūndu*. Not, *muga*. When, *wundin*.

Certain adverbs can be inflected for person and number, thus:

Where shall I go? *Wundayerrabunningga?*

Where shalt thou go? *Wundayerrabunnindyi?*

Where shall he go? *Wundayerrabunniñ?*

and so on for all persons and numbers.

Prepositions.

On top, *gunna*. Down, *dhugga*. Between, *dhuri*. Behind me, *bengalwarria*. Outside, *bunnungga*. Out of that, *barridy*. In rear of me, *wullingaia*. In here, *ngunná*. In or under there, *ngunniñ*.

Words meaning "is here," "was here," "will be here," also exist in this language.

Many prepositions can be inflected for number and person :

Singular	1st Person	...	In front of me	... <i>Ngunalundya</i> .
	2nd "	...	In front of thee	... <i>Ngunalundyi</i> .
	3rd "	...	In front of him	... <i>Ngunalung</i> .

and so on through the dual and plural.

Exclamations.

Ya! calling attention.—*Bängamugi*, cease!

Numerals.

One, *meddhung*. Two, *bullála*.

VOCABULARY OF WIRADYURI WORDS.

This vocabulary contains about 430 words collected personally among the Wiradyuri natives on the Lachlan, Macquarie, and Murrumbidgee rivers. Instead of arranging the words alphabetically they are placed together under separate headings:—Family terms—Parts of the body—Natural objects—Animals—Trees—Weapons—Adjectives—Verbs. As the equivalents of English terms will most frequently be required they are put first.¹

FAMILY TERMS.

A man	....	....	<i>gibir</i> or <i>mén</i> .	Girl	....	....	<i>gunnadhurai</i> .
Old man	....	....	<i>bidyar</i> .	Child, either sex	....	....	<i>burai</i> .
Husband	....	....	<i>nguban</i> .	Father	....	....	<i>bubbin</i> .
Clever man	....	....	<i>wiardhuri</i> .	Mother	....	....	<i>guni</i> .
Young man	....	....	<i>walwi</i> .	Elder brother	....	....	<i>gagang</i> .
Small boy	....	....	<i>gibirgang</i> .	Younger brother	....	....	<i>galbumañ</i> .
Woman	....	....	<i>inar</i> or <i>buládyeru</i> .	Elder sister	....	....	<i>min-gan</i> .
Old woman	....	....	<i>dhurbagang</i> .	Younger sister	....	....	<i>barrigan</i> .
Wife	....	....	<i>buddung</i> .	Infirm old person	....	....	<i>gugun</i> .

PARTS OF THE BODY.

Head	....	....	<i>bullang</i> .	Lower jaw	....	....	<i>nhami</i> .
Forehead	....	....	<i>ngulung</i> .	Back of neck	....	....	<i>nhün</i> .
Hair of head	....	....	<i>wuran</i> .	Throat	....	....	<i>guddhe</i> .
Beard	....	....	<i>yerrañ</i> .	Ear	....	....	<i>wudha</i> .
Eye	....	....	<i>mill</i> .	Mouth	....	....	<i>nguñ</i> .
Eyebrow	....	....	<i>nyer</i> .	Lips	....	....	<i>willin</i> .
Eyelid	....	....	<i>mil-kuruganna</i> .	Tongue	....	....	<i>thallun</i> .
Eyelash	....	....	<i>dyirmir</i> .	Teeth	....	....	<i>irang</i> .
Nose	....	....	<i>murudha</i> .	Liver	....	....	<i>guralu</i> .
Nostrils	....	....	<i>mirral-mirril</i> .	Kidneys	....	....	<i>mänggar</i> .
Cheek	....	....	<i>dhuggal</i> .	Breasts, female	....	....	<i>ngammung</i> .

¹ Compare with my "Dharruk Language and Vocabulary," *Journ. Roy. Soc. N.S. Wales*, vol. xxxv, pp. 155-160.

Heart	....	....	<i>gên.</i>
Navel	....	....	<i>birrañ.</i>
Navel-string	....	....	<i>gural.</i>
Belly	....	....	<i>burbing.</i>
Ribs	....	....	<i>dhür.</i>
Middle of back	....	....	<i>wangan.</i>
Back	....	....	<i>birra.</i>
Shoulder	....	....	<i>wülgar.</i>
Arm	....	....	<i>buggur.</i>
Elbow	....	....	<i>nyuna.</i>
Armpit	....	....	<i>gilgin.</i>
Hand	....	....	<i>murra.</i>
Wrist	....	....	<i>dhummal.</i>
Little finger	....	....	<i>budyen.</i>
Thumb	....	....	<i>gunin.</i>
Finger nail	....	....	<i>gulu.</i>
Calf of leg	....	....	<i>wuluma.</i>
Thigh	....	....	<i>dhurrang.</i>
Knee	....	....	<i>bügang.</i>
Kneecap	....	....	<i>gurigurer.</i>
Shin	....	....	<i>bugu.</i>
Foot	....	....	<i>dyinnang.</i>
Big toe	....	....	<i>gunin.</i>
Heel	....	....	<i>dhungang.</i>

Intestines	....	....	<i>bürbün.</i>
Blood	....	....	<i>gô-añ.</i>
Fat	....	....	<i>wammo.</i>
Skin	....	....	<i>gulun.</i>
Bone	....	....	<i>dhubbul.</i>
Buttocks	....	....	<i>mugun.</i>
Anus	....	....	<i>bubul.</i>
Groin	....	....	<i>gulin.</i>
Penis	....	....	<i>dhün.</i>
Glans penis	....	....	<i>nyiren.</i>
Testicles	....	....	<i>biddha.</i>
Sexual desire	....	....	<i>wurrunha.</i>
Fornication	....	....	<i>yungurrang.</i>
Vulva	....	....	<i>thundu.</i>
Nymphæ	....	....	<i>dyurun.</i>
Meatus urinarius	....	....	<i>muni.</i>
Pubic hair	....	....	<i>bui.</i>
Copulation	....	....	<i>tharralabena.</i>
Semen	....	....	<i>gubbang.</i>
Masturbation	....	....	<i>kuddiguddimunna.</i>
Urine	....	....	<i>kil.</i>
Excrement	....	....	<i>kuna.</i>
Veneral	....	....	<i>buggin.</i>

NATURAL OBJECTS.

Sun	....	....	<i>yêre.</i>
Moon	....	....	<i>gyu-wong.</i>
Stars, collectively	....	....	<i>mimma.</i>
Pleiades	....	....	<i>inar-inharr.</i>
Venus	....	....	<i>gibirguñ.</i>
Rainbow	....	....	<i>yulubirgin.</i>
Clouds	....	....	<i>yuru.</i>
Sky	....	....	<i>gununggullung.</i>
Thunder	....	....	<i>muruburrai.</i>
Lightning	....	....	<i>maru.</i>
Rain	....	....	<i>yurung.</i>
Dew	....	....	<i>güggil.</i>
Mist	....	....	<i>guddhalbar.</i>
Fog	....	....	<i>guang.</i>
Snow	....	....	<i>gunama.</i>
Frost	....	....	<i>dyuggar.</i>
Hail	....	....	<i>ilwarrai.</i>
Cloud	....	....	<i>yurong.</i>
Water	....	....	<i>gulling.</i>
Ground	....	....	<i>dhuggun.</i>
Mud	....	....	<i>bingan.</i>
Stones	....	....	<i>wallung.</i>
High hill	....	....	<i>dyirrama.</i>
Sand-hill	....	....	<i>gurrai.</i>
Light	....	....	<i>ngullan.</i>
Sunshine	....	....	<i>iradadhuna.</i>
Darkness	....	....	<i>buruandhang.</i>

Heat	....	....	<i>wugil.</i>
Cold	....	....	<i>bulludhai.</i>
Fire	....	....	<i>wi.</i>
Smoke	....	....	<i>guddhal.</i>
Camp	....	....	<i>ngurung.</i>
Hut	....	....	<i>gundyi.</i>
Food	....	....	<i>dhungang.</i>
Flesh	....	....	<i>dhün.</i>
Watercourse	....	....	<i>dhurrang.</i>
Grass, collectively	....	....	<i>bogarru.</i>
Trees, collectively	....	....	<i>gigil.</i>
Bark of trees	....	....	<i>dhurang.</i>
Firewood	....	....	<i>gigil.</i>
Ashes	....	....	<i>bunui.</i>
Charcoal	....	....	<i>ngurra.</i>
Leaves of trees	....	....	<i>gurrit.</i>
Eggs	....	....	<i>kubbuga.</i>
Honey	....	....	<i>ngurru.</i>
Edible grub	....	....	<i>dhumun.</i>
Pathway	....	....	<i>mura.</i>
Shadow	....	....	<i>guramun.</i>
Tail of animal	....	....	<i>dhun.</i>
Echo	....	....	<i>warrul.</i>
Fur of opossum, etc.	....	....	<i>gidyung.</i>
Spines of porcupine	....	....	<i>girrigul.</i>
Scales of fish	....	....	<i>yirin.</i>

ANIMALS—Mammals.

Native bear	....	....	<i>burrandang.</i>
Wombat	....	....	<i>bunggada.</i>
Dog	....	....	<i>burumain or mirri.</i>
Wild dog	....	....	<i>yuke.</i>
Opossum	....	....	<i>womboran or wille.</i>
Water rat	....	....	<i>biggun.</i>
Kangaroo rat	....	....	<i>gulbo.</i>
Native cat (black & white)	....	....	<i>mabi.</i>
Native cat (yellow & white)	....	....	<i>dhalbirrang.</i>
Porcupine	....	....	<i>günyi.</i>

Wallaby	....	....	<i>murriwan.</i>
Flying fox	....	....	<i>bullauir.</i>
Platypus	....	....	<i>dhumbirrily.</i>
Bandicoot	....	....	<i>gudyun.</i>
Flying squirrel, small	....	....	<i>budharung.</i>
Ringtail opossum	....	....	<i>gindang.</i>
Kangaroo	....	....	<i>womboin.</i>
Wallaroo	....	....	<i>gundharwar.</i>
Red kangaroo	....	....	<i>murri.</i>

ANIMALS—Birds.

Birds, collectively	....	....	<i>dyibbiñ.</i>
Crow	....	....	<i>wagan.</i>
Laughing jackass	....	....	<i>guguburra.</i>
Curlew	....	....	<i>gurebun.</i>

Plain turkey	....	....	<i>gumbal.</i>
Mallee hen	....	....	<i>yüggai.</i>
Quail	....	....	<i>gunäma.</i>
Plain lark	....	....	<i>dyilburi.</i>

Lark	....	....	<i>buraiagara.</i>
Eaglehawk	....	....	<i>mullian.</i>
Emu	....	....	<i>nguruñ.</i>
Native companion	....	....	<i>burolgang.</i>
Common magpie	....	....	<i>gurruba.</i>
Black magpie	....	....	<i>wibu.</i>
Pewee	....	....	<i>guliridi.</i>
Black duck	....	....	<i>budkanbang.</i>
Pelican	....	....	<i>gulaiguli.</i>
Ibis	....	....	<i>bururgen.</i>
Swan	....	....	<i>dhundhu.</i>
Mopoke	....	....	<i>ngugung.</i>
Pigeon (bronze wing)	....	....	<i>yammar or wubba.</i>

Rosella parrot	....	....	<i>bulanbulangang.</i>
Ground parrot	....	....	<i>buran.</i>
Green parrot	....	....	<i>gunungburdyang.</i>
Parroquet	....	....	<i>dhungai.</i>
Common hawk	....	....	<i>walga.</i>
Fish hawk	....	....	<i>bibbida.</i>
Kingfisher	....	....	<i>dhalir.</i>
White cockatoo	....	....	<i>mura.</i>
Plover	....	....	<i>bullaradyara.</i>
Blue crane	....	....	<i>murgu.</i>
Grey crane	....	....	<i>burragang or gunga- rung.</i>

ANIMALS—*Fishes.*

Perch *gagulen.*

| Black bream *gubir*.

ANIMALS—*Reptiles.*

Tree iguana	... ..	<i>gugar.</i>
Ground iguana	... ..	<i>guda or dhuli.</i>
Jew lizard	... ..	<i>nhurran.</i>
Sleepy lizard	... ..	<i>burrendhar.</i>
Shingle-back lizard	... ..	<i>buggai.</i>
Death adder	... ..	<i>dhummin.</i>
Frog	... ..	<i>gulanggu.</i>

Turtle	....	....	<i>gudumang.</i>
Carpet snake	....	....	<i>yubba.</i>
Black snake	....	....	<i>Kullendyutūin</i> or <i>bud-</i> <i>hang.</i>
Brown snake	....	....	<i>warraleng.</i>
Common grey lizard		....	<i>guddhan.</i>

ANIMALS—*Invertebrates.*

Locust, large	....	....	<i>kalangkaling.</i>
Locust, small	....	....	<i>inggal.</i>
Blowfly	....	....	<i>buga.</i>
Louse	....	....	<i>munhu.</i>
Nit of louse	....	....	<i>thundin.</i>
Jumper ant	....	....	<i>yalgo.</i>

Bulldog ant	....	....	<i>burungang.</i>
Centipede ....	....	....	<i>gen.</i>
Mosquito ....	....	....	<i>kummun.</i>
Scorpion ....	....	....	<i>dhunbuñ.</i>
Greenheaded ant....	....	....	<i>gunama.</i>
Mussel ....	....	....	<i>bindugas.</i>

TREES AND PLANTS.

A "squeaking-tree"	<i>maburan,</i>
Leaning tree	<i>dhalgang.</i>
Dead tree	<i>yalgū.</i>
Hollow tree	<i>ngarl.</i>
Apple tree	<i>gubbut.</i>
Stringy bark	<i>gūndai.</i>
Wattle	<i>yanaqang.</i>

Ironbark ....	....	<i>muggar.</i>
Yellow-box ....	....	<i>bargang.</i>
White-box ....	....	<i>biri.</i>
Cherry-tree ....	....	<i>bumborean.</i>
White gum ....	....	<i>yarra.</i>
Jeebung ....	....	<i>bumbadhulla.</i>

WEAPONS.

Tomahawk	.....	<i>dhauin.</i>
Koolamin	.....	<i>marin.</i>
Yamstick	.....	<i>kunnai.</i>
Spear, wood	.....	<i>thulu.</i>
Spear, reed	.....	<i>dyirril.</i>
Spear-thrower	.....	<i>wommar.</i>
Spear, shield	.....	<i>girran-girran.</i>

Waddy shield	<i>ugummal.</i>
Fighting club	<i>bundi.</i>
Hunting club	<i>birrang.</i>
Boomerang	<i>bürgan or bülgang.</i>
Net bag	<i>kalbon.</i>
Fish net	<i>mia.</i>
Nose-peg	<i>bun-gal.</i>

ADJECTIVES.

Alive	.....	murun.
Dead	.....	bullu.
Large	.....	munun or binnal.
Small	.....	bubadyul.
Long	.....	bámirr.
Short	.....	bumbandkul.
Good, right	.....	murrumbang.
Bad, wrong	.....	nunnabiddi.
Hungry	.....	ngurran.
Thirsty	.....	gullinginda.
Red	.....	girri-girri.
White	.....	burra-burra.
Black	.....	budhang.
Green, as grass	.....	gidyen-gidyen.
Quick	.....	burrai.
Slow	.....	indang-yunne.

Blind	....	..	....	<i>mugiñ.</i>
Deaf	....	....	....	<i>mugudha.</i>
Strong	....	....	....	<i>yárdhura.</i>
Weak or light	....	....	....	<i>wura.</i>
Heavy	....	....	....	<i>bunggawal.</i>
Valiant	....	....	....	<i>mírringan.</i>
Afraid	....	....	....	<i>gelgel.</i>
Sweet	....	....	....	<i>nguddhai.</i>
Bitter	....	....	....	<i>burradyung.</i>
Straight	....	....	....	<i>dhulu.</i>
Crooked	....	....	...	<i>wulliwulli.</i>
Tired	....	....	....	<i>bírrabumain.</i>
Silent	....	....	....	<i>dylmung.</i>
Ripe	....	....	....	<i>yigi.</i>
Unripe	....	....	....	<i>gumba.</i>
Blunt edge	....	....	....	<i>mugu.</i>

Sharp edge	....	....	<i>yunggalli.</i>
Fat	....	....	<i>wammu.</i>
Lean	....	....	<i>nunnaigan</i>
Hot	....	....	<i>wogil.</i>
Cold	....	....	<i>balludhai.</i>
Clear	....	....	<i>ngullar.</i>
Dirty	....	....	<i>dhuggungir.</i>
Angry	....	....	<i>dhullai.</i>
Sleepy	....	....	<i>yurai.</i>
Glad	....	....	<i>guddhang.</i>
Sorry	....	....	<i>ngurrar.</i>
Greedy	....	....	<i>miral.</i>
Grey-headed	....	....	<i>yiribang.</i>
Sick	....	....	<i>yinggal.</i>
Stinking	....	....	<i>buga.</i>
Wide	....	....	<i>munnar.</i>
Narrow	....	....	<i>kurbandul.</i>
Baldheaded	....	....	<i>gumbu.</i>

Many	....	....	....	<i>muddu.</i>
Few	....	....	....	<i>gulbir.</i>
Some	....	....	....	<i>bubadyul.</i>
Jealous	....	....	....	<i>ngulbuldhai.</i>
Lame	....	....	....	<i>wirgannha.</i>
Near	....	....	....	<i>kuginda.</i>
Far	....	....	....	<i>birrunga.</i>
Deep	....	....	....	<i>ngurambul.</i>
Shallow	....	....	....	<i>gunnan.</i>
Pregnant	....	....	....	<i>burbimbal.</i>
Hard	....	....	....	<i>wallan.</i>
Soft	....	....	....	<i>bunya.</i>
Dry	....	....	....	<i>burung.</i>
Wet	....	....	....	<i>gidha.</i>
Scarce	....	....	....	<i>burambe.</i>
Plentiful	....	....	....	<i>muddu.</i>
Easy	....	....	....	<i>yeddung.</i>
Difficult	....	....	....	<i>nhunnai.</i>

VERBS.

Die	.....	.....	.....	<i>bullung.</i>
Eat	.....	.....	.....	<i>dhurra.</i>
Drink	.....	.....	.....	<i>widyara.</i>
Sleep	.....	.....	.....	<i>yurai.</i>
Stand	.....	.....	.....	<i>wurranha.</i>
Sit ....	.....	.....	.....	<i>winga.</i>
Lie	.....	.....	.....	<i>wirringa.</i>
Come	.....	.....	.....	<i>dhanyana.</i>
Go ....	.....	.....	.....	<i>gunyunna.</i>
Talk	.....	.....	.....	<i>yerra.</i>
Walk	.....	.....	.....	<i>yanninna.</i>
Run	.....	.....	.....	<i>bunbunna.</i>
Bring	.....	.....	.....	<i>dhangangga.</i>
Take	.....	.....	.....	<i>gangga.</i>
Carry	.....	.....	.....	<i>dyirramurra.</i>
Make	.....	.....	.....	<i>dhurburra.</i>
Break	.....	.....	.....	<i>bungamurra.</i>
Beat	.....	.....	.....	<i>bumulli.</i>
Fight	.....	.....	.....	<i>bumullintha.</i>
Kill	.....	.....	.....	<i>bullubuni.</i>
Arise	.....	.....	.....	<i>burragga.</i>
Fall	.....	.....	.....	<i>bundinga.</i>
See	.....	.....	.....	<i>ngaga.</i>
Stare at	.....	.....	.....	<i>muramia.</i>
Hear	.....	.....	.....	<i>winnaunga.</i>
Know	.....	.....	.....	<i>winnungumma.</i>
Think	.....	.....	.....	<i>ngunnulla.</i>
Grow	.....	.....	.....	<i>yurinnha.</i>
Give	.....	.....	.....	<i>ngungga.</i>
Love	.....	.....	.....	<i>guraimurra-</i>
				<i>dhunganang.</i>
Hate	.....	.....	.....	<i>widdabu-dyingandulla.</i>
Sing	.....	.....	.....	<i>bubbilli.</i>
Weep	.....	.....	.....	<i>yungga.</i>
Play	.....	.....	.....	<i>wagagi.</i>
Cook	.....	.....	.....	<i>gyu-walli.</i>
Marry	.....	.....	.....	<i>burramullina.</i>
Cough	.....	.....	.....	<i>kurra.</i>
Steal	.....	.....	.....	<i>mundubang.</i>
Burn	.....	.....	.....	<i>gunnannha.</i>
Beg	.....	.....	.....	<i>ngundadha.</i>
Barter	.....	.....	.....	<i>ngungiladha.</i>
Bite	.....	.....	.....	<i>buddha.</i>
Blow with breath	.....	.....	.....	<i>bumbe.</i>
Catch	.....	.....	.....	<i>burrama.</i>
Climb	.....	.....	.....	<i>kulliana.</i>
Conceal	.....	.....	.....	<i>kurugunber.</i>

Cut	.....	.....	<i>bangadya.</i>
Frighten	.....	.....	<i>gelgel.</i>
Fly (as a bird)	.....	.....	<i>burranha.</i>
Hang up	.....	.....	<i>bielgumbirra.</i>
Hold	.....	.....	<i>murama.</i>
Jump	.....	.....	<i>burubidya.</i>
Keep	.....	.....	<i>wirrimbir.</i>
Laugh	.....	.....	<i>gindadha.</i>
Scratch	.....	.....	<i>wūnyadha.</i>
Leave off	.....	.....	<i>yalu.</i>
Lose	.....	.....	<i>nhunnainmi.</i>
Pinch	.....	.....	<i>nyinna.</i>
Praise	.....	.....	<i>murrambambungan.</i>
Rejoice	.....	.....	<i>guddhabungan.</i>
Remember	.....	.....	<i>wiwinungadhunnal.</i>
Forget	.....	.....	<i>wagganyi.</i>
Go ahead	.....	.....	<i>muramuddha.</i>
Turn off	.....	.....	<i>waiaimbiddya.</i>
Turn back	.....	.....	<i>ngulunguggi.</i>
Send	.....	.....	<i>wannanumbia.</i>
Shake	.....	.....	<i>dyllinga.</i>
Shine	.....	.....	<i>gudhara.</i>
Spread	.....	.....	<i>billaima.</i>
Suck	.....	.....	<i>widyarra.</i>
Swim	.....	.....	<i>yawidya.</i>
Taste	.....	.....	<i>nguddha.</i>
Touch	.....	.....	<i>yudé.</i>
Twist	.....	.....	<i>waiaama.</i>
Rub	.....	.....	<i>ndaama.</i>
Seek	.....	.....	<i>wurrábinya.</i>
Spit	.....	.....	<i>dyámber.</i>
Smell	.....	.....	<i>budadha.</i>
Throw	.....	.....	<i>birumba.</i>
Pitch	.....	.....	<i>wannungga.</i>
Help	.....	.....	<i>yamma.</i>
Sweat	.....	.....	<i>ngulwai.</i>
Roast	.....	.....	<i>giva.</i>
Whistle	.....	.....	<i>wilbuddha.</i>
Avenge	.....	.....	<i>dhullaibungando.</i>
Pretend or lie	.....	.....	<i>yambulyala.</i>
Kiss	.....	.....	<i>wiembannhal.</i>
Vomit	.....	.....	<i>mulama.</i>
Dance	.....	.....	<i>wuggama.</i>
Dive	.....	.....	<i>wubunginya.</i>
Sting	.....	.....	<i>dhuni.</i>
Dream	.....	.....	<i>yeddharmura.</i>

VOCABULARY OF NGUNAWAL WORDS.

The following vocabulary contains 290 of the most commonly used words in the Ngunawal language, with their English equivalents. Every word has been

noted down carefully by myself from the lips of old men and women in the native camps.

THE FAMILY.

A man ....	....	....	murriū.	Elder sister ....	....	dhaddung.
Husband ....	....	....	ma-ung.	Younger sister ....	....	gūlwan.
Clever man ....	....	....	muyulung.	A woman ....	....	bullan.
Youth ....	....	....	warrumbul.	Wife ....	....	mān.
Boy ....	....	....	bubal.	Girl ....	....	mullangan.
Elder brother ....	....	....	dyiddyang.	Child (neuter) ....	....	gudha.
Younger brother ....	....	....	gugai.	Children ....	....	gudhaiar.

THE HUMAN BODY.

Head ....	....	....	guddagang.	Knee ....	....	ngumung.
Hair of head ....	....	....	dherrung.	Foot ....	....	dyunna.
Eye ....	....	....	migalaity.	Heart ....	....	gauar.
Nose ....	....	....	nyigity.	Blood ....	....	dyinggi.
Back of neck ....	....	....	nhūn.	Fat ....	....	bēwan.
Throat ....	....	....	guddity.	Bone ....	....	wiak.
Ear ....	....	....	guri.	Penis ....	....	dhun.
Mouth ....	....	....	dhambir.	Testicles ....	....	gurra.
Teeth ....	....	....	yerra.	Pubic Hair ....	....	buruwarri.
Breast, female ....	....	....	ngumminyang.	Sexual desire ....	....	burundunung.
Navel ....	....	....	ngurra.	Copulation ....	....	yangiliri.
Belly ....	....	....	bindhi.	Masturbation ....	....	natymiliri.
Back ....	....	....	bengal.	Semen ....	....	burung.
Arm ....	....	....	nhurung.	Vulva ....	....	binnañ.
Hand ....	....	....	murrangga.	Anus ....	....	dhula.
Fingers ....	....	....	gulu.	Excrement ....	....	gunung.
Finger-nails ....	....	....	birril.	Urine ....	....	dyungur.
Thigh ....	....	....	dhurra.	Venereal ....	....	middyung.

INANIMATE NATURE.

Sun ....	....	....	winyu.	Whirlwind ....	....	wingguraminyu.
Moon ....	....	....	kubbadang.	Pipeclay ....	....	gubbity.
Stars ....	....	....	dyurra.	Red ochre....	....	gubur.
Pleiades ....	....	....	dyin-ding-gang.	Fire ....	....	kanbi.
Clouds ....	....	....	gurrang.	Smoke ....	....	muril.
Sky ....	....	....	mindyigari.	Food, flesh ....	....	ngulli.
Thunder ....	....	....	murungul.	Food, vegetable ....	....	dyarabañ.
Lightning ....	....	....	meup-meup.	Flowers ....	....	gamburra.
Rain ....	....	....	garrit.	Day ....	....	bural.
Dew ....	....	....	dyingidyirrang.	Night ....	....	kagu.
Frost ....	....	....	dhuggura.	Dusk ....	....	dyirranggan.
Water ....	....	....	ngadyung.	Grass ....	....	gurwai.
Ground ....	....	....	dhaura.	Leaves ....	....	dyirrang.
Dust ....	....	....	dhungul.	Eggs ....	....	kubbugang.
Mud ....	....	....	murung.	Honey ....	....	kauanggal.
Stone ....	....	....	gurubung.	A liar ....	....	kwigarak.
Sand ....	....	....	dyardyar.	Grubs, collectively	....	gawiñ.
Charcoal ....	....	....	murrangga.	Grub, gum tree ....	....	burrung.
Light ....	....	....	dhurrawang.	Grub, river oak ....	....	dyigung.
Darkness ....	....	....	buranya.	Pathway ....	....	mura.
Heat ....	....	....	gunnama.	Camp ....	....	nguru.
Cold ....	....	....	gurrita.	Shadow of tree ....	....	kumburu.
Dawn ....	....	....	birrimbigang.	Shadow of man ....	....	buak.
East wind....	....	....	bulyanggang.	Summer ....	....	winyuwangga.
West wind ....	....	....	guraguma.	Winter ....	....	magarawangga.

MAMMALS.

Native bear ....	....	....	gurabun or gula.	Rock wallaby ....	....	burrai.
Dog ....	....	....	mirri.	Porcupine....	....	burugun.
Opossum ....	....	....	wille.	Kangaroo ....	....	buru.
Kangaroo rat ....	....	....	balbu.	Platypus ....	....	mlunggang.
Native cat....	....	....	murugui.	Flying squirrel	....	banggu.
Bandicoot....	....	....	mundawari.	Ringtail opossum....	....	dyindai.
Small rat ....	....	....	gunnimang.	Bat ....	....	nguddya-nguddyan.

BIRDS.

Birds, collectively	....	<i>budyen.</i>
Crow	....	<i>wagulan.</i>
Laughing jackass	....	<i>guginyal.</i>
Curlew	....	<i>warabin.</i>
Swan	....	<i>dyinyuk.</i>
Eaglehawk	....	<i>mulleun.</i>
Common magpie	....	<i>karrugang.</i>
Black magpie	....	<i>dyirrigang.</i>
Mopoke	....	<i>yuyu.</i>
Night owl	....	<i>binit-binit.</i>

Rosella parrot	....	<i>bunduluk.</i>
Common hawk	....	<i>walga.</i>
Kingfisher	....	<i>diktigang.</i>
Peewee	....	<i>giliruk.</i>
Plover	....	<i>bindirradirrik.</i>
Crane	....	<i>galu.</i>
Pheasant	....	<i>dyagula.</i>
Black cockatoo, small	....	<i>gang-gang.</i>
Black cockatoo, large	....	<i>wamburung.</i>
Bower-bird	....	<i>dyara.</i>

FISHES.

Perch	....	<i>dhinngur.</i>
Herring	....	<i>berrumbunung.</i>
Eel	....	<i>yumba.</i>

Gudgeon	....	<i>budang.</i>
Black-fish	....	<i>wuggar.</i>

REPTILES.

Water iguana	....	<i>dhurrawarri.</i>
Frog	....	<i>dyirrigurat.</i>
River lizard	....	<i>biddyiwang.</i>
Tree iguana	....	<i>wirria.</i>
Sleepy lizard	....	<i>muggadhang.</i>
Small lizard	....	<i>bunburung.</i>
Death adder	....	<i>muddyawit.</i>
Turtle	....	<i>gudamang.</i>

Carpet snake	....	<i>wigur.</i>
Any snake	....	<i>mugga.</i>
Brown snake	....	<i>wurungal.</i>
Black snake	....	<i>dyirrabity.</i>
Tiger snake	....	<i>berragundhang.</i>
Jew lizard	....	<i>nurrung.</i>
Tree snake	....	<i>mulundyalung.</i>

INVERTEBRATES.

Locust, large	....	<i>gulañ-gulañ.</i>
Locust, small	....	<i>dyirribrit.</i>
Mother louse	....	<i>gunggal.</i>
Nit of louse	....	<i>dyandang.</i>
Young lice	....	<i>maiadi.</i>
House fly	....	<i>menga.</i>

Bulldog ant	....	<i>bulbul.</i>
Jumper ant	....	<i>dyambity.</i>
Maggot	....	<i>dhurraunda.</i>
Centipede	....	<i>gururigang.</i>
Mussel	....	<i>bindugañ.</i>

TREES AND PLANTS.

Any tree	....	<i>ngulla.</i>
Ti-tree	....	<i>mudda.</i>
Wattle	....	<i>nummerak.</i>
Pine	....	<i>buggumbul.</i>
Oak	....	<i>dulwa.</i>
Cherry-tree	....	<i>mummadya.</i>
Gum-tree	....	<i>yerradhang.</i>

Yellow-box	....	<i>bargang.</i>
Honeysuckle	....	<i>dhulwa.</i>
Ironbark	....	<i>thirriwirri.</i>
Stringybark	....	<i>buruñ.</i>
Yam	....	<i>dharañ.</i>
Bulrushes	....	<i>gummuk.</i>

WEAPONS, UTENSILS, ETC.

Tomahawk	....	<i>mundubang.</i>
Koolamin	....	<i>gunggun.</i>
Yamstick	....	<i>gawalang.</i>
Spear	....	<i>dyuin.</i>
Spear lever	....	<i>womur.</i>
Spear shield	....	<i>bimbiang.</i>
Waddy shield	....	<i>murga.</i>

Fighting club	....	<i>kidyeru.</i>
Hunting club	....	<i>bundi.</i>
Boomerang	....	<i>berra.</i>
Net bag	....	<i>goañ.</i>
Canoe	....	<i>mundang.</i>
Headband	....	<i>gambañ.</i>
Kilt	....	<i>burrañ.</i>

ADJECTIVES.

Alive	....	<i>mulanggari.</i>
Dead	....	<i>burrakbang.</i>
Large	....	<i>buggarabang.</i>
Small	....	<i>nyerrigurang.</i>
Tall or long	....	<i>bámir.</i>
Low or short	....	<i>gungur.</i>
Good	....	<i>yeddung.</i>
Bad	....	<i>gudba.</i>
Red	....	<i>dhirrum dhirrum.</i>
White	....	<i>daggurugurak.</i>
Black	....	<i>buru-bura.</i>
Mad	....	<i>gauang.</i>
Crazy	....	<i>yugi-yugang.</i>
Stubborn	....	<i>wambarung.</i>
Valiant	....	<i>gurumbul.</i>
Quick	....	<i>burrai.</i>
Slow	....	<i>gúnyan.</i>
Strong	....	<i>gurwang.</i>

Afraid	....	<i>dyani-dyanty.</i>
Tired	....	<i>yurrity.</i>
Sharp	....	<i>midyir-midyir.</i>
Fat	....	<i>bewanbang.</i>
Lean	....	<i>ngauatyba.</i>
Hot	....	<i>winyudha.</i>
Cold	....	<i>gurrit.</i>
Angry	....	<i>yugo.</i>
Sleepy	....	<i>gung-gung.</i>
Glad	....	<i>waddhir.</i>
Sorry	....	<i>ngarabda.</i>
Greedy	....	<i>merradhiñ.</i>
Sick	....	<i>gér.</i>
Stinking	....	<i>bugung.</i>
Much	....	<i>gurung.</i>
Little	....	<i>minggang.</i>
Pregnant	....	<i>malingitimang.</i>
True	....	<i>gándyaina.</i>

VERBS.

Die...	berak.	Laugh	birrigai.
Eat	dhaimbaliri.	Scratch	birradilli.
Drink	wimbaliri.	Tear	bunggur.
Sleep	ngambori.	Forget	walagi.
Stand	dharrri-iri.	Do	bungi.
Sit	ngulla-iri.	Send	iddyi.
Talk	dhuniai.	Suck	binbi.
Tell	dhunung.	Swim	yerra.
Walk	yerrabi.	Fly	yerra.
Run	munni.	Bathe	ngaugi.
Bring	munnagali.	Search for	gadi.
Take	mali.	Spit	dyngai.
Make	bungi.	Smell	billai.
Break	mudyat.	Bite	burri.
Chastise	millai.	Play	woggabaliri.
Beat	ngubi.	Touch or catch	mungga-iri.
Arise	badyi.	Throw	yerrambi.
Fall down	buggali.	Pitch	wadhi.
See	nangi.	Whistle	windi.
Look	naii.	Pretend	kwigai.
Hear	ngurrambai.	Vomit	garrugi.
Listen	wanggirrali.	Dance	wagi.
Give	yunggi.	Dive	burugi.
Cook	dyandai.	Sting	dyandi.
Steal	gurrangi.	Hunt	gadali.
Request	dyunggayai.	To scent, as a dog	gundali.
Sing	yunggabali.	Drive	dhurati.
Weep	nyimali.	Go	yerrabi.
Blow, with breath	bumbi.	Come	munnagai.
Blow, as wind	bunima.	Burn	gunnami.
Climb	bui-i.	Chop	gudbaiiri.
Conceal	buddai.	Feel	burrangiri.
Jump	dyutbi.		

FURTHER EXCAVATIONS ON A PALÆOLITHIC SITE IN IPSWICH.

BY NINA FRANCES LAYARD.

[WITH PLATES XIX, XX.]

AT the Meeting of the British Association held in Belfast in September, 1902, I exhibited Palæolithic implements from the brick-earth of Ipswich. (Cf. *Journ. Anthr. Inst.*, vol. xxxiii, p. 41.)

As the pit from which they were taken was at that time being worked for clay, and a large number of men were employed, it was impossible to make accurate observations either with regard to geological conditions, or the precise position in which each flint was found.

With a view to a more thorough examination of the site, I invited the co-operation of a Committee in October last, in connection with the Ipswich Museum, the Ipswich Scientific Society, and others, to arrange special excavations for this purpose. Sir John Evans, who kindly consented to allow his name to be on the Committee, has visited the spot and given most valuable assistance and advice.

The pit is situated on a plateau above the town of Ipswich, a slight depression only indicating the position of an ancient valley which appears to have been cut through boulder clay, and since silted up.

We commenced our work by marking out an area measuring 10 yards by 6, and working from the top down to the implement-bearing bed.

Two workmen were employed under my own daily supervision, and the depth and position of almost every flint found was measured and marked.

After working for a fortnight, we struck our first Palæolithic implement at a depth of $9\frac{1}{2}$ feet. This was a well-worked oval flint in sandy clay. I had the block containing it cut out, so that the flint may be seen in the matrix.

Although it had been noticed before that the implements in this pit were found at levels varying in depth from 8 to $12\frac{1}{2}$ feet, I only ascertained by working regularly from west to east, that they were in reality all on the same floor, which gradually rose several feet from what appeared to be the bed of a former river or pool, now represented by the sedimentary deposits with which it was afterwards filled, so that, while in the south-west corner the flints were $12\frac{1}{2}$ feet below the surface, they were discovered at ever higher levels as we worked eastward. This raises the question as to whether in other similar pits in East Anglia, where the implements are described as scattered up and down throughout a section, they

are not in some cases lying on an undulating floor, where they were all left at approximately the same period.

In the Ipswich pit, a thin line of iron stain marked out the position of the implement-bearing bed in the clay, and, guided by that, we were able to trace what appeared to be the old land surface with tolerable precision. The flints were always found immediately below the stain in the clay, and following this we came to a small bank of gravel also containing flints. During our two months' search, forty implements came to light, besides many other flints showing human work.

Only in one instance was a tool found lying directly above another, and it is certainly puzzling to know how it came into this position. I found it myself in the gravel, 5 feet above the bed of clay which contained the oval implements. This specimen is a well-worked ovate form, resembling in shape those found in the clay below, but coloured like the gravel in which it lay. It has a somewhat glossy patina.¹

I also found a ridged flake only $3\frac{1}{2}$ feet from the surface, but with these exceptions all the tools occurred in the same stratum.

The implements showed considerable diversity of form, and it was noticed that the oval and ovate sharp-rimmed tools were embedded in compact clay, while the gravels which sloped down to the clay contained a large number of tools of many other shapes, and the somewhat more sandy clay, in the south-west corner, produced one or two other varieties, among them an elegant pointed implement with good patination. (Plate XIX, Fig. 2.)

It has been suggested that the oval tools were washed out of the higher gravels into the position in which they were found, but against this view is the fact that there were no unworked pebbles with them, which would inevitably have been the case if a flow of water had brought them down. Whenever we found a flint in this compact brick-earth, it was always an implement. The sorting power of water is well known, but it is expecting too much of it to believe that all the oval flints were selected from among the many other forms, and laid together in one place. The flints show no signs of rolling, and the edges are as keen as when they were first made. Three beautiful specimens which were lying close together are almost exactly similar, and were evidently the work of the same hand, which certainly suggests that they were either purposely flung into the water, or left on the spot by their owner. One of these happened to be found when Sir John Evans was visiting the pit with me, and again I had the block cut out containing the tool. The ogee curve is remarkably pronounced in them. (Plate XIX, Fig. 3.)²

¹ Since the above was written I have been able to trace the connection between the upper and lower gravels, from which I conclude that these implements are of the same date as those found in and below the clay.

² Later excavations on the same site convince me that these tools are derived from the gravels above. Probably the sharp rims of these oval implements caused them to work more readily into the clay.

It is noticeable that the implements found in the clay, although at such a great depth, are almost entirely without patination. This tendency to "retain their original colour in impervious clay" is mentioned by Sir John Evans, in his work on *Ancient Stone Implements*.

The thick ochreous and glossy patina for which some of the earlier flints found in other parts of this pit were remarkable, is absent from those more recently discovered, and I had hoped, by coming upon an example of these highly coloured specimens *in situ*, that we should have been able to connect their condition with the medium in which they were buried. Only one resembling these was found, however, and that was under the grass on the surface, where it must have been thrown out when the older part of the pit was in working.

Among the tools from the gravel (which vary greatly in form) is a minute, delicately worked implement, which appears to have been made in imitation of a larger-pointed weapon. This has been described as a toy tool, made for a Palæolithic child. (Plate XX, Fig. 2.) Such tools are rarely found in England, but have been recognised on the Continent. It may, however, be a small spear-head, the forerunner of the Neolithic arrow-head, though the finding of an equally minute copy of an ovate implement is against this explanation. In order to give some idea of its comparative size, I have placed it beside a large pointed implement found at the same level, though not in the same pit. (Plate XX, Fig. 1.) An implement of quite unique pattern, also from the gravel, is shown in Plate XIX, Fig. 1. It may be described as a cutting tool with a concave edge.

Two small-pointed implements were found lying point to point close together in sandy clay, while beside them was a small oval tool.

There is no doubt that a large number of the rougher tools would have been unnoticed by the workmen, and carted away with the gravel, unless their work had been minutely watched. Certainly the numerous flints showing human work, though not wrought with sufficient care to be dignified with the name of tools, would have escaped observation altogether. Some, of the roughest possible description, were found side by side with those most highly finished.

The only other remains found were fragments of the teeth and tusks of elephant, rhinoceros, ox and deer, but these were $2\frac{1}{2}$ feet below the implements in coarse gravel. Below this again in the underlying clay were blackened thread-like fibres, which appeared to be the rootlets of plants, probably water-plants.

From the lowest point at which implements were found, namely, $12\frac{1}{2}$ feet from the surface, we took a boring to discover the relative position of the chalky boulder clay. Passing through alternate beds consisting of white-earth clay, gravelly sand, white-earth clay again, yellow clay, loamy gravel, and strong brown clay, we at length touched the chalky boulder clay, which was from $14\frac{1}{2}$ to 15 feet below the flint-bearing bed. Into this we penetrated 4 feet, but did

not succeed in getting through it. (Fig. 1.) Our work did not extend far enough to enable us to trace the sides of the valley, but future borings may satisfactorily determine whether we shall here also find the boulder clay.

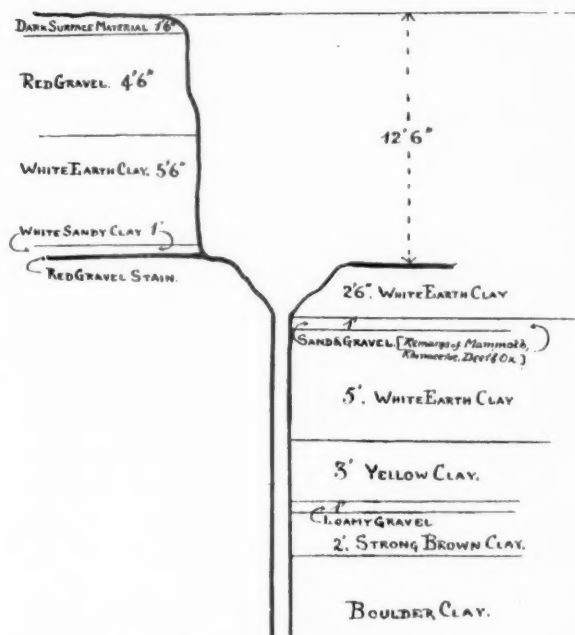


FIG. 1.—SECTION OF PIT AND BORING.

picked up in the wet clay, stained the fingers a bright red, suggesting the use to which it might have been put. I have also found in the adjacent boulder clay, in another part of the pit, fossils, such as *Gryphaea incurva* from the Lias, Belemnites from the chalk, volcanic tuff, and last, but not least, a small piece of oolite, which is interesting as demonstrating the transporting agency of ice. This appears to be proved by the fact that on one side the tiny roe-like lumps are rubbed down till a perfect cross section is seen, revealing the nucleus of quartz sand, while on the other side the roe-like appearance has not been interfered with. It is difficult to conceive of any other agent by which this fragment could have been brought from the great distance at which oolite is found, without its turning over, and becoming rolled and rubbed down on all sides. It must have been packed firmly in the ice, to have arrived in this condition.

Our recent researches appear to suggest :—

- (1) That the flints are within a short distance of their original position.
- (2) That the difference of level at which they were found, does not prove that they were laid down at different periods, but was caused sometimes by the irregularity of the old surface.

¹ Probably from Hunstanton.

Among the implements are a few made from flints the chalky crusts of which show what appear to be glacial scratchings, and these tend to confirm their Post-glacial origin.

A lump of red chalk embedded in what appeared to be boulder-clay, must have travelled a long way before it reached Ipswich,¹ and may have been washed out of the side of the boulder clay valley. This was beside the animal remains.

Red ochre, which I also found, has been recognised before in caves inhabited by Palaeolithic man. This, when

- (3) That the animal remains were $2\frac{1}{2}$ feet below the Palæolithic bed.
- (4) That compact white clay does not produce patination.
- (5) That this colony of Palæolithic men was apparently Post-glacial.¹

The flints found during this last excavation are the property of the Ipswich Museum.

Explanation of Plates.

Plate XIX, Fig. 1. Cutting tool with concave edge.

” ” 2. Elegant pointed instrument.

” ” 3. Ovate implement with ogival curve.

Plate XX, Fig. 1. Large Palæolithic hatchet.

” ” 2. Supposed toy tool.

¹ As the excavation is still being continued, these notes are merely a diary of observations made at the time, and are subject to future correction.

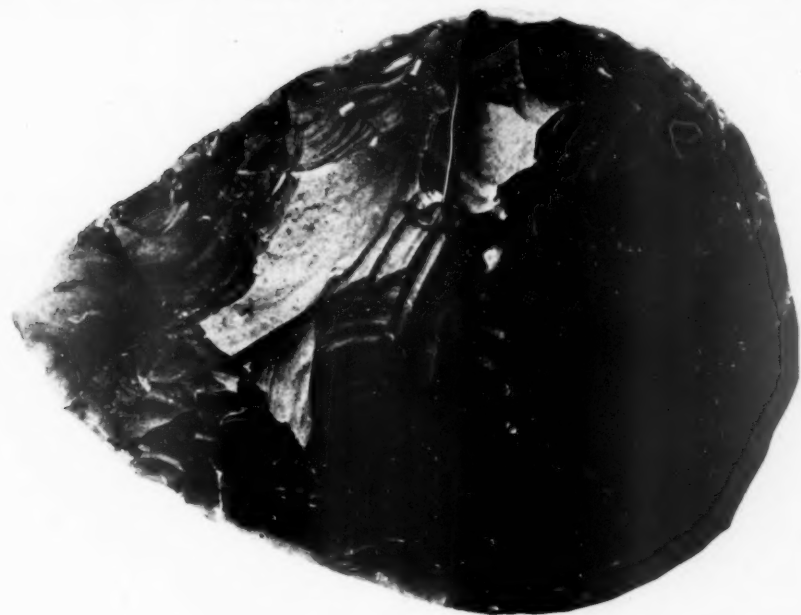


Fig. 3. $\frac{1}{2}$.



Fig. 2. $\frac{1}{2}$.



Fig. 1. $\frac{1}{2}$.

FURTHER EXCAVATIONS ON A PALÆOLITHIC SITE AT IPSWICH.



FIG. 1. $\frac{1}{2}$.



FIG. 2. $\frac{1}{2}$.

FURTHER EXCAVATIONS ON A PALEOLITHIC SITE IN IPSWICH.

ETHNOLOGICAL REPORT ON THE STSEÉLIS AND SKAÚLITS
TRIBES OF THE HALŌKMÉLEM DIVISION OF THE SALISH
OF BRITISH COLUMBIA.

By CHARLES HILL TOUT, Local Correspondent of the Anthropological Institute.

THE notes recorded in this Report were gathered by the writer under the auspices of the Government Grant Committee of the Royal Society, a second grant of £40 having been made by the Society for the continuance of his studies among the Salish. They deal chiefly with the Stseélis and Skaúlots tribes which occupy reservations on Harrison River, one of the larger tributaries of the Fraser, which makes junction with it about 100 miles up from its mouth.

Both tribes are members of the Halkōmélem division of the Salish of British Columbia, that is to say, both speak the Halkōmélem language, though it is doubtful whether the Stseélis as a whole belonged originally to this division. They have many customs and beliefs peculiar to themselves, and their culture differs in some important points from that of the tribes of the Fraser Delta. It is worthy of note, too, that in their physical characteristics, as recorded by Dr. F. Boas, they differ very materially from the surrounding tribes. They have "a shorter stature; the head is exceedingly short and broad, surpassing in this respect all other forms known to exist in North America. The face is not very wide, but very low, thus producing a chamæprosopic form, the proportions of which resemble those of the Nass River [a northern Coast tribe] face, while its dimensions are much smaller. In this face we find a nose which is absolutely higher than that of the Nass River Indian with his huge face. It is at the same time rather narrow. The lower portion of the face appears very small."¹ It is, therefore, not at all improbable that we see in the Stseélis a somewhat modified remnant of the race that occupied these regions prior to the advent of the Salish, who we know are an intrusive people, and comparative late-comers.

Their traditions, which, like those of the neighbouring Tcil'qéuk, are undoubtedly founded upon real, historical occurrences, derive a portion of the tribe from an interior mountain people.

The tribe as constituted in earlier, pre-trading days was, according to my informants, composed of five separate groups or septs, each living more or less apart by itself. Some of these were probably of Halkōmélem origin, the others would appear to be of foreign stock.

¹ Tenth Report on N.W. Tribes of Canada. B.A.A.S., 1895.

In regard to these old tribal groups or septs I would like to say that my general studies of the Lower Fraser tribes have led me to the conclusion that they have a historical significance, and are not merely accidental or fortuitous divisions of the tribes, as some writers suppose. They mark, I think, the different original families, or family groups, that founded the tribe. This becomes clear from the care each sept takes in preserving the family pedigrees and records, which show that these groups claim independent and distinct origin and are generally unrelated to one another.

Among the Stsḗlis, according to my informant "Charlie," the original sept or first family was founded by a man named Squailimeltq (= *surprised*) who came down from the sky-world. He had two wives who also are said to have come down from the upper regions. The first one was called "Teñtcaúwilwet" (= *getting down*) and the second "Cwiálem" (= *glad*).

While we may disregard the account of the celestial origin of this gentleman and his wives, I believe we may rely upon the rest of the tradition. These Halkōmélem tribes, or rather the original elements of them, must have had a common home prior to their separation into their present subdivisions; their community of language and culture demand this. This common home could not have been the Fraser Delta for the reasons given in my first report on the Halkōmélem tribes. To hold their own in a strange country they must have been a populous band. We can very well imagine, then, that when they had driven out, exterminated or absorbed such tribes as occupied the Delta upon their arrival, their numbers would compel them to separate.

Small groups of them, heads of families, would thus separate themselves from the main body and go forth to seek desirable location elsewhere on the River and found new settlements. Else why do all these present Halkōmélem tribes ascribe their individual origin to one or two separate families who first settled on the tribal headquarters? I think there can be no doubt that these "First men," who are said to have founded the different subdivisions of this branch of the Salish Stock, and whom the family or tribal traditions mostly bring down from the clouds, are the more venturesome units of the original Halkōmélem band, who went forth singly or in twos and threes with their families to found new settlements for themselves, and whose true origin has been lost in the mists of time. These tribal legends or traditions, then, though obscured with many baseless fancies, contain undoubted elements of historical truth, and are therefore of practical value in determining the history of the Stock.

As there were apparently five septs in the old Stsḗlis tribe, three of whom are said to have come down from the upper reaches of the Chehalis River in the mountains, the others were probably of Halkōmélem origin. The late Chief "George," indeed, gave Dr. F. Boas a pedigree of his ancestors some years ago in which a person called "Ts'átsemilta" is spoken of as the "first" man and founder of his sept. I would therefore regard the two "first" men of these septs as the

original founders of the Stsḗlis band, which was later augmented by three other septs of mountain origin, who may have been members of the Salish Stock, but were more probably a fragment of an antecedent race. François, one of my chief informants, claims to be a descendant of one of these three septs. His remote ancestor is not supposed to be a heaven-born man. These mountain people claim descent from those mythic, shape-shifting beings who inhabited the Indian world in earlier days. "TE Cwómetsel," the Otter-man, was the founder of François' family and sept. The founder of the second sept was "TE P'k'élekel," the mountain goat-man. The founder of the third was "Staseluk," whose origin seems a little uncertain. The word means "noise." At his advent there was a great noise in the clouds and hence he received that name. I could learn nothing further respecting him or his descendants, who now seem to have all passed away.

Collectively these three mountain septs were formerly known by the name "Teiltcáloktel," which is said to signify "the people of the interior," or "those who live in the forest." This is clearly a name given to them by the Stsḗlis proper and is a Salish term. The "Teiltcáloktel" came down from the upper reaches of the Chehalis River and amalgamated with the Stsḗlis proper many generations ago. According to their traditions the union came about in the following manner. After the settlement of the Stsḗlis at the mouth of the river of that name, they constructed weirs or barriers in the stream to hinder the progress of the salmon so that they might be the more easily caught and speared. These weirs shut off the salmon from the "Teiltcáloktel" above and their supply of food failed them. Consequently there was much distress and hunger among them. Having waited day after day in vain for the "run" of the salmon, which never came, the Otter Chief determined to go down stream and see why the salmon did not come up as usual. So putting on his Cwómetsel coat he swam down as an otter. He found that their dearth of salmon had been caused by the barrier which the Stsḗlis had erected at the mouth of the river; and when it became dark he pulled up several of the central stakes of the weirs and so made a passage for the salmon up stream. Then he returned home again. For a few days the salmon came up in their usual numbers, then they fell off again. A second time the Otter Chief went down and destroyed the centre of the barrier, and the same thing happened again. He went a third and a fourth time, but each time the Stsḗlis repaired the breach in their weir and stopped the passage of the salmon. When the Otter Chief saw that they could never be sure of supply of salmon as long as the barrier was kept up, he determined to visit the Stsḗlis openly and make some terms with them by which the salmon might be allowed to run freely at certain times. So he put aside his Cwómetsel coat and went down to visit the Stsḗlis, taking many blankets as presents for the chiefs with him. When he met with the Stsḗlis he spoke thus with them, "Your younger brothers on the upper reaches are starving because you have hindered the passage of the salmon up stream. I

pray you to make some arrangement with us, whereby the salmon may for a season have a free run that my people perish not wholly of hunger." He then presented the chief and headmen with the blankets he had brought.

The StsÉélis listened to his words in a friendly manner, and made a compact with him to lift their weir at certain times during the salmon run and allow the fish to go up stream, in return for which he was to pay them a yearly tribute of blankets. The intercourse thus begun between the two tribes led in time to closer intimacy, and eventually the mountain people came down at the invitation of the StsÉélis and settled with them.

It would seem from the tradition that when this took place the Otter and Mountain-Goat people laid aside their animal shapes permanently and became ordinary men and women.¹

After this metamorphosis the first true man of the Otter sept was called "Cwelkúmitiyil." The term appears to have reference to the man's feet, but what it was I could not gather. François either did not know himself or would not tell me.

The first son of this man was called "Kwācātseltel," a name which the elder sons of his descendants have borne ever since. François himself was thus called in the native tongue, or rather it was his Indian name; for even by the natives themselves he is now generally spoken of as Plánswa, which is their corruption of his baptismal name.

As far as I could gather from François, his people entertained no special regard for otters and mountain-goats. These animals are looked upon as being in some way related to them, but this relationship did not prevent them from being trapped or hunted, and their flesh eaten.

He was, however, very uncommunicative on the subject and could not be induced to talk freely. When asked if his ancestors used an otter "sākwaíam" (crest) he admitted they did, but would or could not say whether they regarded themselves as under the protection of the "spirit" of the otter; though it would appear that the septs among the neighbouring Skraúlit, who are believed to have sprung from similar mystic animals, generally hold this view, and formerly employed symbols of these animals as their crests. That crests of the kind were common among them is clear from the presence of this term in their language, "sākwaíam" being everywhere used as the equivalent of our term "crest." It will be necessary to refer to this subject again, in dealing with the traditions of the Skraúlit; I shall, therefore, reserve such remarks as I have to offer on this head, till I deal more specifically with it in that connection.

I have stated that the StsÉélis were divided into five septs, each with its own settlement or camp. These were respectively, in up-river order:

¹ This putting on and off of the animal form was always effected in this region by a corresponding putting on and off of the *skin* of the animal whose form and character was assumed. The myths herein presented are full of incidents of the kind.

1. "Skwāltūq" = *Sheltered*. This camp was about two miles below the main settlement, in a sunny bay. It is no longer inhabited by the Indians, but its site is marked by an old logging-camp of the early white settlers.
2. "Stūtūwātsel" = *On the outside*. This camp was on the outer side of the Chehalis River, thence its name.
3. "Seklwātsel" = *On the landside*. This was on the opposite bank from the other on the "land side" of the river.
4. "Yāçketel" (meaning unknown). This was separated from the last by broken ground and lay on the bank of another slough.
5. "Tlōseka" (meaning unknown). This camp lay across the Harrison River and was distant about two miles from the main village or settlement.

The term "Stsēlis," the meaning of which seems now to be lost, is the collective name by which the whole tribe was known. Only one of the old camping sites is now occupied. This is "Stūtūwātsel." Here one may see two old log-houses with cedar-slab roofs, and the remains of the posts of the old long-house that stretched along the bank for several hundred feet. The modern village of the Stsēlis stands back a hundred yards or so from the river. It is made up of about a score of one and two-storied frame-houses. These form two sides of a large square, the third side of which is occupied by one of the sloughs while the Harrison River constitutes the fourth. In the centre of this square, apart by itself, stands the village church. The Stsēlis are converts of the Oblate Mission, but are not such zealous churchmen as their cousins of the coast of whom I wrote in my last report. They are not in such prosperous circumstances as the Siciatl nor has their village the same attractive appearance. There is a general air of dilapidation about the place from which not even the church escapes. I noticed, too, that no daily services were held in the absence of the priest, and the bell never marked the Hours during the day as among the Siciatl. I have a suspicion from what I saw and heard that there is a very general hankering after the old condition of things. There seems to be a spirit of discontent and dissatisfaction abroad among the Indians—not only among the Stsēlis, but elsewhere—on account of the frequent deaths that are taking place in their bands. Some of the old people do not hesitate to attribute this to the disregard of their old customs and practices. Others attribute it to the white man's food, of the "taboos" of which they are ignorant, and so suffer in consequence. For they imagine that we have food restrictions and taboos similar to their own, to disregard which means sickness or death. Others again believe it to be caused by the physical deterioration of their young men consequent upon their abandonment of the old rules of life. In the old days the Indian youths were trained to feats of strength and endurance and inured from their infancy to hardship and privations. The old Indians grow quite pathetic sometimes when they touch upon this subject. They believe their race is doomed to die out and disappear. They point to the sites of

their once populous villages, and then to the handful of people that constitutes the tribe of to-day, and shake their heads and sigh. Some of the bolder and more resolute of them openly declare that the only remedy is a return to the ways of their forefathers; and in some centres there are not wanting signs of a recrudescence of old-time customs and practices. Whilst I write, one of the largest gatherings that has taken place among the Indians for many years past is actually in progress at Fort Rupert, and the potlatch is certainly a more frequent occurrence of late years than it was formerly among many of the tribes.

I inquired of Fran  ois how the Sts    lis used to train their youths. He said parents made their children go out and bathe in the river every night and morning the whole year round as soon as they could walk alone. They would first whip their naked bodies with small branches to make the skin tingle and burn. Some people used to put these whips in the flames of the house-fire for a little while. A whip thus treated when applied to a boy's back would save him from becoming idle and lazy. Whipped daily with such an instrument he would become an active and energetic man, and be able to acquire much wealth. When they reached puberty they would constantly make use of the "Kaiti        ," or sweat house, lance their bodies and limbs with knives, "to let the bad blood out and make them strong," and force long rods down their gullets into their stomachs to make themselves vomit. Often they would lie out all night and expose their bodies to the elements till they became so hardy that they could scarcely feel the cold at all, and could stay for hours without discomfort in the chilling waters of the river or lake.

The settlements or territories of the Sts    lis were regarded with envious eyes by the surrounding tribes. Their waters abounded in fish, the shallows in their river forming one of the favourite spawning grounds of the salmon. Hence an abundance of this staple food of the old-time Indian was easily procurable. The adjacent mountain-slopes contained large numbers of deer, bear, elk and goats as well as other smaller animals. In winter the lake, river and sloughs were covered with ducks of all kinds. So famous indeed was their territory for its plentiful supplies of salmon that outside tribes from long distances used to come every salmon season and pay the Sts    lis a kind of tribute or royalty to be permitted to fish in their waters. Bands from the upper Salish tribes and from far up and down the coast would congregate there in the fishing season. Sometimes disturbances and fights would occur, but the Sts    lis were a strong and populous tribe and seem to have been able to more than hold their own with their visitors. It is recorded of one of their warriors, a man noted for his great personal strength and bravery, that when a band of S         people once took away with them his canoe, he got into another alone and followed after them down the Fraser; and, although they had the start of him by several hours, he overtook them and with his paddle only, killed seventeen of them and carried off their scalps. I saw this man on one of my visits. He is now old and decrepit and has little of the appearance of such a doughty warrior save in his manner, which is not at all pleasant or genial to white men. This old

warrior is said still to possess a string of the scalps he took from the heads of his enemies in earlier days.

I tried to induce him to show these and to tell me something of the old times; but he could not be moved to do either. François told me he was also as famous a bear hunter as a warrior; that once coming suddenly upon a big bear without any weapon in his hand he caught the brute from behind in his arms and broke its ribs in and killed it by the force of his hug alone.

SOCIOLOGY.

If my informants have not erred in their statements, it would appear that the Stsēélis were more democratic in their social structure than the average Salish tribes. There were but two classes or social divisions among them, viz.: the chiefs and the people. The chiefs and their families, as elsewhere, formed a class apart. All the rest of the tribe were on a footing of social equality.

I don't know whether this was due to the general wealth and prosperity of the community as a whole, or whether it was one of the points in which the Stsēélis differed from the other Salish tribes.

Each settlement or village had its own chief, but one of these ranked above the others and was over-lord of the whole tribe. The chieftaincy, whilst in theory open to any man of the tribe, was in practice really hereditary, and generally passed from father to son, generation after generation, as the pedigrees of the reigning chiefs plainly show. In order to clear away any doubt on this point I inquired what would happen if a reigning chief died leaving only a young son behind him; and was told that in such a case the wealthiest man of the village would act as "seat-warmer" for the boy, who, when he came to man's estate, would automatically step into his father's place and become chief, and the "seat-warmer" would retire to his former position in the tribe, but would by courtesy thereafter be given the treatment accorded to chiefs. If a chief died leaving no male issue but having a daughter, the chieftaincy would pass to her, and, through her by marriage, to her husband if he were, as was generally the case, a fitting man.

It is clear from these customs that the Siamship was in practice hereditary among the Stsēélis as among the other Salish tribes of this region.

The principal duties of a Stsēélis chief consisted in maintaining order in the village, deciding disputes and looking after the poor and aged. His privileges lay mainly in the honour of his position, for although he might claim or take anything that was brought into the camp, he was expected to make full recompense for it. Indeed among the Stsēélis it was *de rigueur* for a chief to return more than the value of anything he took or received. In sharing his game a hunter usually set aside the best portions for the chief, but always received a generous acknowledgment of his gift. Sometimes a successful hunter would take his whole bag to the chief. The latter would thereupon call all the people together to share it with him

and would publicly acknowledge his indebtedness to the donor and pay him the full value of the game in blankets.

The Siamship among the Salish appears to have been essentially a patriarchal office or institution. The chief was rather the father than the ruler of the tribe, and his sway seems always to have been mild and beneficent.

MARRIAGE CUSTOMS.

The marriage customs of the Salish tribes seem to differ, more or less, in each group. Among the Sts̄é̄lis early betrothals by the parents were quite common; and when this was not done it was still the parents who generally made the choice of a husband or wife for their children. Sometimes, however, the young people managed their own affairs. A girl was sometimes allowed to choose her own husband and no pressure was put upon her if she was slow in making her choice and rejected young men who were acceptable to her parents. One of the Sōquiām given below affords an interesting example of this.

There no longer appears to be any idea of barter or profit in the mind of the father in the disposal of his daughter in marriage, and he makes nothing out of the occasion. Etiquette demands that he shall return to the bridegroom gifts of like value to those he himself received from him. Indeed the acceptance or rejection of a suitor is not left to him individually, but is the decision of the whole family in council assembled. The disposal of a girl's hand is usually a matter of grave deliberation, whether it be done by an early betrothal or not, till the girl has reached womanhood. This arises in part from the fact that the girl confers her father's status and privileges upon her husband, as a rule, among the Salish tribes of this region. I have already shown how the chieftaincy of the tribe may be acquired by marriage of a chief's daughter. The rights and privileges of the "Sqoiaqī" totem are obtained in the same manner; and so with other rights, possessions, and privileges. We can, therefore, easily understand that the choice of a son-in-law was a matter of considerable importance and could not be made without due consideration.

The common way in which a man sought to learn whether he was acceptable to the parents and relatives of the girl he desired for wife or not, was to take a large bundle of good firewood to her father's house or apartment and offer it to the family. This constituted a formal request for her hand, as it were. If he is regarded as an eligible suitor by the father, the latter will take the wood from him and distribute it among the elder members of his family. The significance of the gift is fully understood by all, and a family council is immediately held. The youth awaits the decision of this council. He squats down near the door, either inside or out, till they have made their decision. He can generally gather some idea whether he is likely to meet with success in his wishes or not by the treatment accorded him. If his suit is favourably regarded by the parents the children and dogs are permitted to play about him unhindered. But if he is unacceptable to them this

does not happen, both children and dogs are driven away from him by the father. After the family council is over one or two of the elders come to where he is waiting and make known its decision to him. When favourable to his wishes he goes home, and shortly after returns with his marriage gifts, which he presents to his bride's father. A feast is now generally given by the girl's people, after which she accompanies her husband to his own or his father's house, where they now live together. On leaving, the bride's father presents the bridegroom with blankets and other gifts equal in value to those given to himself. Should the bridegroom have no parents or other near relations, it was not unusual for him in those circumstances to stay and live with his wife's people.

Marriage took place early among the Stsḗlis, the girl being about fifteen, and the youth a year or two older.

I made repeated inquiries respecting the rules or statutes of prohibition in force among the old-time Stsḗlis, but found great difficulty in obtaining any definite information on the subject beyond the fact that those nearly related by blood could not intermarry. First and second cousins fell within the prohibited degrees, but beyond those limits there seem to have been no hard and fast rules. When questioned concerning the reason of these prohibitions they could give no other reply than that it was their "custom," and that it was considered "big shame" for persons connected by blood to intermarry. This is in keeping with the general practice and belief of the Salish. In one of the "Sōquám" I gathered from the Thompson Indians, it is related that a brother lay surreptitiously with his sister, who became with child by him, and so greatly did the sense of shame affect the girl's mind, that she induced her brother to go away secretly with her in order that their father might not be disgraced and shamed in the eyes of the tribe by their conduct; and later the pair expiated their offence by self-immolation. Whatever may have been the origin of these prohibitions among the Salish, it is certain that marriages between those nearly related were held in abhorrence long before there was any possibility of missionary influence making itself felt among them.

PUBERTY CUSTOMS.

These, like the marriage and mortuary customs, seem also to differ in each of the Salish tribes. No two seem to follow or have quite the same customs. The practices of the Stsḗlis, for example, differ materially from those of the Siciátl, which I described in my last report. The period of the seclusion of a girl upon reaching the age of puberty was a month and a half. The boys do not seem to have been regularly secluded at all. As soon as a girl's first courses came upon her, the mother would construct a small shelter ("skéikemēl") of cedar bark for her near by the settlement, the centre of which would be hollowed out after the manner of the winter "skúmēl," indeed the term "skéikemēl" appears to be the diminutive form of this word. In this the girl resided for a month and a half, or until after her second period, her mother taking her food to her. For the first eight days she

did nothing at all; after that time she spent her days in learning to make mats and baskets. She was under certain taboos or restrictions in the matter of food. She might not eat any fresh meat or fish of any kind, only that which had been long killed and dried. These restrictions had a twofold purpose. First, to prevent her from becoming a greedy and sensual woman, and second, because of the "bad medicine" or the malign influence she was supposed to exercise at this time upon animals by reason of her condition. A menstruating woman was a thing of abhorrence in the eyes of the Indian, and imparted misfortune and ill-luck to the opposite sex in many ways. For instance, if she stepped over a sheath of arrows (which, by the way, she would not wittingly do), the arrows would be rendered useless to the owner thereafter, and might become the cause of his death. Again, if she passed in front of a hunter carrying a gun, the weapon would never shoot straight again. A father or husband of a menstruating woman would never think of going hunting himself, nor would other hunters allow him to accompany them. No luck would attend himself and he would bring misfortune upon others. Indeed, so harmful and malignant did the Stse'lis believe the influence of a woman to be when her courses were upon her, that it was the rule among them for their wives, as well as their daughters, to go into seclusion for the space of four days at these times. They used the "skéikemel" shelters for this purpose. Consequently these structures must have been more or less permanent among them.

A girl's first course was called "tētēcēauq," the second "tlukhyilem" = *putting on the moccasin*, and all after periods "kēékō."

MORTUARY CUSTOMS.

These differed to some extent from those of the neighbouring Fraser tribes, according to my informants. The Stse'lis do not seem to have possessed that extreme dread of the dead which we find among the Teil'qéuk, for instance. We gather this both from their statements and from their Sōquūm. The corpse was not taken out of the house until it was ready to be "put away." This "putting away" always took place as soon after death as was convenient. If the person died in the earlier part of the day, then the corpse would be "put away" that same day; but if during the latter part, then it would not be removed till next morning. My informant stated that the body was never painted among them, only washed and the hair combed. I am somewhat in doubt about the accuracy of this statement; it is so contrary to the usual practice, and seems to be rather a description of the treatment of a corpse at the present time than of the older days; but it may be correct. The mourners observed the usual custom of cutting the hair. The manner in which this was done indicated the depth of the mourners' sorrow. If the deceased was not particularly dear to them they cut only the tips of the hair. Customarily they cut it on both sides of the face as high as the ears. If, however, the deceased was especially dear to them, and their sorrow and grief very deep, then they would cut all their hair off close to the head and keep it so for a longer or shorter period

according to their feelings. Sometimes this period stretched over years. A shorn head, therefore, among them had much the same significance as deep crape garments among ourselves.

In their disposal of the severed hair the Stsḗlis neither burnt it in the fire nor buried it in the ground, as did some of the other Salish tribes. They carefully kept it to be "put away" with them when they died. As among the other tribes, all the mourners took the ceremonial bath four days after the disposal of the corpse; and the relatives of the deceased held the mortuary feast, at which food and some of the property of the dead person was burnt, that he might not go faint or empty-handed to the Land of the Departed. It is almost impossible to learn anything by direct questioning concerning the beliefs of the Indians on the subject of the Hereafter, but happily we may gather some idea of these beliefs indirectly from their myths. I was fortunate enough on this occasion to secure two Sōquām which bear on this question. These are given below. One of them is particularly interesting in that it relates how a sorrowing husband sought and found his wife in the land of the dead, and with the assistance of the chief of that country, restored her to life and brought her back to live with him again.

The Stsḗlis have three distinct terms which they employ in speaking of those who have passed away.

These are respectively :—

"Te smestēuqsetl," meaning *The spirit-people*.

"Sela-aúta," meaning *The departed*, and commonly applied to the newly-dead.

"Te spolakwētsa," meaning both *Corpse* and *Ghost*, or apparition of the dead, in which they had a firm belief.

Of these three terms, the first is used to distinguish between persons in this world and those who inhabit the Land of the Departed; the same root, meaning "people," is found in each word thus :—

mestēuq = *people*; and smestēuq-setl = *spirit-people*.

The second seems to express the condition of the departed between the time of leaving their bodies and arriving in the "spirit-world." The third is used, as I have said, in a two-fold sense.

According to my informants the grave-boxes of the Stsḗlis were never decorated with paintings or carvings of the *súlia* of the owner. This was probably because burial in boxes was not the primitive manner of disposing of the dead. With them, as their stories testify, the corpse was usually "put away" in trees. The custom of putting it away in boxes or under slab shelters was borrowed from the neighbouring tribes, and is of comparatively modern origin.

BIRTH AND NAMING CUSTOMS.

My notes on this head are not very extensive, but such as they are they show practices differing from those of the neighbouring Halkōmélem tribes.

Women were never confined in the communal dwelling, but in separate temporary shelters, somewhat similar to those they occupied during their menstruating periods. If birth took place in the winter, the period of seclusion was four days, but in summer weather it lasted eight days. According to "Mary Anne," there was no restriction in the matter of food during this period. In her labour a woman would generally be assisted by two elderly women of maternal experience.

The Sts   lis practised cranial deformation. This was effected during the first months of the child's existence by means of a pad of sl  w  fastened across the frontal bone of the infant's head and secured to the cradle-board. The forehead was thus given a backward slant, a line of beauty in a Sts   lis mother's eyes.

In the matter of names a child received its name sometime during the first year of its life. If a boy, he would be called after some of his ancestors on his father's side of the house; if a girl, the name would be taken from her mother's side. This was the usual practice. Sometimes though, a boy received his own father's name, the latter taking a new one from the ancestral stock.

Family names were as much private property as other of their belongings, and in the old days no one would dream of taking a name from another person's family, though this is not infrequently done now, I am told, in some tribes. These names were never mere tags or labels to distinguish one person from another but were always connected with the family legends, and had reference to some true or fancied incident in the life of the ancestors of the family possessing them. It is difficult to get their significance even when known to the Indians themselves. They have the usual dislike of primitive people of speaking about their names, especially to those outside the tribe. Even the modern youths, whose training has been that of the white man rather than that of their own ancestors, show a strong reluctance to give or tell their Indian names. John Morgan, the half-breed who assisted me in my investigations among the Sts   lis, and who has lived among them since boyhood and married an Indian wife, told me in this connection that the young men of the tribe would scarcely reveal their Indian names even to him. They seem, however, to have no such scruples about their baptismal names or those casually bestowed upon them by the whites, evidently regarding these as something quite different from their own.

The giving or taking of names was never an ordinary or common event. It was always associated in the Indian mind with the distribution of presents and feasting, and had for him a religious significance. To bestow or take a name without a feast to celebrate or mark the occasion was dishonouring to their ancestors and the tutelary spirits.

The Sq       ceremony which figures so largely in the naming and other feasts of the Lower Fraser tribes had no part, according to my informants, in those of the Sts   lis, which is the more remarkable as the chiefs of the neighbouring Skra  lits were members by right of direct inheritance of this totem. The reason

given by the *Stseélis* for its absence among them on these occasions was that the *Stseélis* were too proud to hire "mysteries" from tribes who were subject to them and existed only on their sufferance. There is probably truth in this statement, the *Stseélis* and the other *Halkōmélem* tribes of the Fraser having apparently little but their language in common. Their intercourse was rather with the tribes to the north of them, the Lillooets of Fort Douglas, who took their women in marriage and gave them their own in return.

FOOD TABOOS AND RESTRICTIONS.

The old-time *Stseélis* observed many restrictions in the matter of food. Some of these I was able to learn. For example, menstruating women must abstain from all fresh meats of any kind. The heart, liver, kidneys and spinal-cord of deer were especially tabooed. It was not easy to learn much on these points, or to gather the origin or significance of these restrictions. The usual reply to all inquiries of the kind is that it was the "custom." That in the native mind is an all-sufficient reason for the practice, and old François, whom I interrogated on the matter, had probably never before in his life had his attention directed to the question of "why" or "wherefore" he practised this or that custom. That it was dangerous to disregard these things he knew, for had he not himself suffered by so doing; and he related to me the following incident, which happened when he was a youth. He was out with a party of hunters, and a deer was killed; and he was called upon to assist in the skinning and cutting of it up. Before he did so, the slayer of the deer bade him be careful not to touch the spinal-cord, and above all not to put anything near his mouth that had been in contact with it. "I did not pay any special regard to these instructions," he said, "and in cutting up the animal I ran a piece of the back-bone near the tail into my fingers and put my hand to my teeth to pull it out. Soon after my face and neck "swelled up" so that I could scarcely breathe or see, and I don't know what would have happened to me if the man who killed the deer had not spit upon his hand and rubbed the spittle over my face and neck, and thereby caused the swelling to go down." François's explanation of the case was that the deer was this man's *súlia*, and that no one could eat or even touch with his mouth the liver, heart, kidneys or spinal-cord of a deer or anything connected therewith, unless permission to do so was first given by the man whose *súlia* the deer was. If he gave permission, then these parts might be eaten by anybody without harm, but not otherwise. François thought the same applied to the other animals they eat, such as the bear, the mountain-goats, etc., when they were men's *súlia*, but could give no certain information in this regard. About the deer he had no doubt. His general ideas on the subject were that if an animal were not a *súlia* or "mystery" animal, any part might be eaten; but as those who had *súlia* were generally careful not to reveal what these were, no one could be sure about any animal, so it was better to abstain altogether from eating these particular parts.

Those who had one or more of the animals commonly hunted for food as their *súlia* were always successful hunters of those animals. For example, the man who had a deer *súlia* could always find and kill plenty of deer. And it was the same with respect to other animals, both birds and fish. The fisher whose *súlia* was a salmon never lacked for these fish.

SULIAISM.

I made special inquiries into this subject among the Stse'élis and learnt many interesting and suggestive things in connection therewith. I have already shown that a *súlia* whose material form was that of an edible object enabled the owner of it to be eminently successful in his quest for that object; but among the Stse'élis success in hunting or fishing could be conferred upon the hunter or fisher by other *súlia* than those which inhabited or took the forms of the animals hunted; though it usually came in that way. Certain *súlia* of a mythological character also gave success to their *protégés* in their undertakings. The *protégé* of a certain one-legged being was noted for his success as a deer hunter. This man believed that his strange *súlia* used to drive the deer into the lake for him, where they were easily despatched. The bow and arrow *súlia* also conferred the power upon its owner to kill whatever he shot at; but this kind of *súlia* had one serious drawback. If an arrow broke, the owner's life was in danger. It would appear that this disability belongs to all *súlia* having the outward or material form of an inanimate object that was fracturable, such as spears, paddles and the like. There is deep significance in this. It seems to suggest that the life of the owner of such a *súlia* was bound up, or intimately connected, with the well-being or existence of those objects under which his *súlia* manifested itself; and one seems to catch here an echo of the "soul-box" belief. I sought to learn as much as possible concerning the relation which existed, or was supposed to exist, between the individual and his protective *súlia*, but could gather little beyond what I have recorded, and the following story: Once a man who had a she-bear for his *súlia* went out hunting bear. He followed one to its den in a cave. As he sought to enter the cave after the bear, the latter, who was really his *súlia*, caught hold of him and wanted him to stay and live with her as her husband. This the man refused to do, whereupon she said to him that when he died he should come and live with her, and be her husband.

According to François a man paid regard to his *súlia* by following his instructions, but did not pray to him in the sense in which we employ that word, nor feel under any special obligation to him for his help and protection. Anything that the man could do would be a small matter in the eyes of such a mystery being as his *súlia*. Nor, as far as I could learn, did the hunter pay any regard or show respect to his prey because his *súlia* appeared to him in his visions in that form. The real *súlia* was a "spirit" or "mystery being"; and though it might take the form of a deer, or a bear, or any other animal, it could not be hurt

or killed, even if the animal were slain. Under this view we can readily understand how a person's *súlia* might be any kind of an object; a stick, a stone, a bit of wood or paint, a basket, a paddle, a canoe, or any other inanimate thing. The object itself was not the *súlia*, only the form, so to speak, under which it manifested itself to its *protégé*; though the two are apparently always intimately and mysteriously connected in the mind of the Indian.

François was unable to inform me whether the *súlia* of the old-time StsÉélis were ranked in a kind of hierarchy according to their "power" or "medicine" as among the Thompsons. He also stated that not everybody acquired a *súlia*; only those who excelled in their special lines, such as great hunters, fishers, warriors, runners and the like; and that women as a rule never acquired *súlia* unless they were *schwa* or witches. When asked whether a man gave protection to the animal or animals under which his *súlia* manifested itself, he replied in the negative, and added that the *súlia* could take care of itself without any help from man. It would seem from this that little regard was paid to the external form of the *súlia* when it represented a living object, and only to an inanimate one when it was something that could be broken or destroyed, and so bring into danger the life of the possessor of the *súlia*.

François is a member of that sept of the StsÉélis whose remote ancestor was an otter. So I sought to learn from him whether his people were known as the "Otter" people, and whether they looked upon the otter as their relatives and paid regard to these animals by not killing or hunting them. He smiled at the question and shook his head, and later explained that although they believed their remote ancestor to have been an otter they did not think it was the same kind of otter as lived now. The otters from which they were descended were otter-people, not animals, who had the power to change from the form of men and women to those of the otter. All the animals in the old-time were like that, they were not just common animals and nothing else; they were people as well, and could take the human or the animal form at will by putting on or taking off the skin or other natural clothing of the animal. This is in keeping with what we gather on this head from the rest of the tribes of this region. Among the Thompsons they have a distinct term in their language by which these mystic beings are distinguished from ordinary animals.

I sought to learn if such a term existed in the StsÉélis, but François did not think so.

I am disposed, from my study of this subject of animal descent, to believe that in all cases where our Indians, and perhaps other primitive peoples as well, claim descent from ancestors who are spoken of as animals, these ancestors are not regarded as mere animals but as beings having or partaking of these dual natures or characteristics which François' progenitors are said to have possessed; and when a family, sept or tribe is said to have sprung from this or that animal, a mythic being of this kind is always meant. This shape-shifting or transformation was invariably effected in this region by donning or casting off

the skin of the animal whose character is assumed. Several instances of the kind will be found recorded in the stories given below.

HEREDITARY TOTEMS.

With regard to the important question of the transmission or hereditability of these personal totems or *súlia*, it was apparently the same among the Sts̄é̄lis as among the Thompsons. Shamans only inherited their *súlia* from their fathers; other men had ordinarily to acquire their own. But this applied only to the dream or vision totem or protective "spirit." In the case of the acquisition of a totem or protective "spirit" by other means, such as meeting or coming in contact with the "spirit" in material form, more particularly where the acquisition is accompanied by the gift of some material object such as the "Sqoíaq̄" mask and the "celmóq̄teis" of the Sk'aúlit̄s or the "Tlukél" of the Tcil'q̄éuk, it was otherwise; and a man could and did transmit the protective influence he had acquired. About this I think there can be no doubt. "Dr. George" the brother of "Captain John," chief of the Súwál̄e sept of the Tcil'q̄éuk, who assisted me in my investigation among that tribe, related to me quite recently that his great-grandfather once met his ghostly guardian in the form of a bear when out hunting. The bear spoke with him and promised to protect him and give him power to take bears easily and without danger to himself. His great-grandfather took the bear as his crest and transmitted both it and the protecting power that accompanied it to his children, and the bear has been the tutelary guardian of the family ever since; and the family names are connected with the incident. When I come to deal with the Sk'aúlit̄s I shall show that two at least of their septs were thought to be under the guardianship of the "spirits" of the mythic beings from whom they are directly or indirectly descended according to their traditions; that they used symbols of these as their crests, which were transmitted from one generation to another, and which carried with them the protective influence of the "spirit" they represented.

And even in the case of the *súlia* or dream totem itself, we see that it was not impossible for the owner to transmit it to his son or his disciple, as this was commonly done by Shamans who possessed "powerful spirits"; from which it seems to me that the heritability of a personal totem was conditioned only by its "power" or "medicine." Where it was "powerful," that is conferred eminent success upon its possessor, the latter is apparently able or believes it worth while to transmit it to his successor. For myself, I am doubtful concerning the non-transmissibility of any *súlia*. The native statements on this head are conflicting and self-contradictory. We are told that a son did not usually inherit his father's dream *súlia* or protective spirit, and yet are told that he always inherited his father's crest or paintings and sculptures of these *súlia*; and we know that according to the native conception of things, the symbol or representative of a "mystery" object or being always pre-supposed or carried

with it the presence of the "spirit" itself; so if he inherited the symbols, it seems to me he could not help inheriting the "spirit" these symbols typified. François gave as the reason for the common non-transmissibility of the personal *súlia*, that it was a *secret* possession, which a man hid from others. I received the same statement from some of the Sk-qómic and Siciatl; yet this is clearly contradicted by the practice of pictographic or plastic representation of the *súlia*. When a man painted or carved a graphic symbol or representation of his personal *súlia*, and placed it in a conspicuous place on his belongings and house, it is not clear how it could be hidden from his fellow tribesmen, or at any rate, from the members of his own family. Again, the smétla dances are all *súlia* dances, in which the dancer characterises or represents in person his *súlia*; and this characterisation is generally so graphic and well done, that any one might know the nature of the dancer's *súlia*; and among those tribes, where masks and other dramatic "properties" were employed, we have marked and ostentatious displays of the *súlia*. It is difficult, therefore, to understand these statements of my informants, unless we take the view that this secrecy was maintained only in the case of that kind of *súlia* which might be injured or destroyed by an enemy, such as the bow-and-arrow, spear or paddle *súlia*. I have shown that the possessors of such *súlia* lay under certain disadvantages compared with those who possessed animal *súlia*; and it may be that this is the true view of the case. At any rate, viewed in this light, the secrecy in these circumstances is explicable, and the statements of the Indians no longer conflict with their old-time practices.

It is next to impossible to get any definite information on these points by direct questioning of the Indians. They do not seem able to see the question with our eyes, or to understand what we wish to learn. We have to gather our information as best we may, indirectly and from the study of their traditions. It is in these latter that we get our best and most reliable information of the past; and many times when my informants have professed entire ignorance of a subject upon which I desired information, I have obtained it later from them in the narration of some of their traditions.

But however we may view the "dream" *súlia*, there can be no doubt that "tutelary spirits" were transmitted and handed down from one generation to another; by which it becomes clear that "group" totemism existed among the Salish; and the only difference that I can perceive between the "group" totemism of the Salish and that of the Northern tribes is, that among the latter the group was confined, at least in theory, to *blood* kindred, and counted on one side of the house only; whereas among the former, the group included those connected by affinitive as well as blood ties, and counted the relatives of both father and mother. We have, therefore, in this country, three different kinds of "group" totemism (not counting those of secret societies, or brotherhoods), viz., that under matriarchal institutions, which American students, following Powell, now generally denominate "clan totemism"; that under patriarchal rule distinguished from the former by the term "gentile totemism"; and that which we find in social groups like the

Salish, where a union of the two earlier states has taken place, and where the social unit is the "family," which comprises the relatives on both sides of the house, which I may denominate "kin totemism" for lack of a better term. In all these groups there is the same transmission of the *common* "protecting genius," from one generation to another. Under matriarchy, this is effected by the "conventional fathers" of the group on the female side of the house, that is, by the maternal uncles. Under patriarchy by the "ostensible or real fathers" of the group on the male side; and under that social structure which results from a combination of the other two, like that among the Salish, by the "fathers" on both sides of the house.

That totemism, *per se*, had really nothing originally to do with "clan" structure or social divisions, and was not dependent upon this social state for its existence as some writers hold, is clear, it seems to me, from the fact that it survived such a radical social change as that which took place in the transition from the matriarchal to the patriarchal state; for it is equally, in this country, a feature of the latter as of the former condition of things, and that it still further survived the much greater social changes which resulted in the evolution of the "family" from a union or modification of the two earlier groups or states.

These disintegrating changes do not appear to have altered the essential character of totemism, the true significance of which, as held by the Indians themselves, lies in the concept of a *protective ghostly genius*.

The "kin groups" of the Salish are as much under the protecting influence of an hereditary totem as are the "clan groups" of the Haida or the "gentile groups" of the Sioux.

DANCES.

As I have already pointed out, dancing was a time-honoured institution and religious exercise among the Sts    lis, as among other American tribes. The period of the Sm    la, or Sm    l    s, that is the "dancing period," extended over and coincided with our month of December. The old-time Sts    lis gave themselves up to this kind of festivity without stint or limit during the Sm    l    s, but for a generation past the practice has been almost wholly abandoned.

The names of such dances as my informants could remember were all *  lia* or "dream" dances. When dancing—we say "dancing," but these so-called "dances" were rather dramatisations of their dreams, than dancing in our sense of the word—the dancers always put down upon their heads. I could not gather much from the Sts    lis concerning the significance of this custom, but from other Indians I was informed that it was "strong medicine" and had a "soothing" or propitiatory influence upon the *  lia* "spirits," similar to the noise of the rattle and the presence of the ceremonial staff or rod of the northern tribes.

Certain of the dancers among the Sts    lis, who had peculiar *s  lia*, used down dyed red. The dance in which this was used was known by the name of the dancer's *s  lia*, which was a mythic female being called "Ska    kw    ."

Others were as follows :—

St'káiya = *wolf-dance*.

Spatc = *black-bear dance*.

Kwíčtsel, Haíklals = *grizzly-bear dance*.

Spál = *raven dance*. (It is noteworthy that this is not the name by which the raven is commonly known to the StsÉélis.)

Tsóktsók = *fish hawk dance*. There was no mistaking the character of the *sília* of this dancer. He danced with arms outspread and quivering, and at intervals made sudden dives or ducks with his head. This represented the characteristic action of the bird first hovering in the air, and then diving for its prey.

Ts'te'lá = *king-fisher dance*. The characterisation of this was similar to the last, only there was no hovering motion.

Skaíyukaía = *shaking or trembling dance*.

All these dream dances are performed singly, unless two or more persons have the same *sília*.

According to my informants, the Skaíep and Hwōhwōks dances of the Coast Salish were not known or practised by the StsÉélis.

RELIGIOUS IDEAS.

The StsÉélis have a singular tradition among them that their ancestors used to observe a kind of Sabbath or seventh day ceremony, long before they heard of the whites. According to François and Mary Anne, the people used to come together every seventh day for dancing and praying. They assembled at sunrise and danced till noon. At this time of the day they believed that everybody stood on his head till the world rolled round again. This topsy-turveydom took place during the middle hours of the day. When the world had come round again, they all fell to dancing and praying again till sunset. I was unable to get a specimen of these prayers. It is difficult to understand this tradition, apart from white influence, at any rate, the seventh day meetings, and the movements of the globe; and when questioned, concerning the being to whom these prayers were addressed, they could give no satisfactory answer. They believed, they said, in "te tētcitl Siám," "the Upper or Heavenly Chief," before they heard of the white man's God; but when pressed as to their conception of this being or his attributes, all their replies show that he was the Missionary's God, seen through the medium of Indian eyes and understandings; and I regard it as extremely improbable that the old-time Indians had any conception at all of a Supreme Being, who dwelt in the heavens and who demanded their homage and prayers. The conception of such a Being is entirely foreign to the native mind, and is in direct conflict with the democratic genius of Salish institutions, and with the ideas embodied in their myths. Some of the Salish tribes, notably the Thompsons, seem to have a reverence for the Dawn or the Rising Sun, but even their myths speak of the Sun itself as a creation

of some of their culture-heroes. The nearest approach to a conception of a supreme being appears in their myth of the Qals or QEQals, but these beings are in most myths sons of the black-bear, by the magpie or the big red-headed woodpecker, and are, at best, only mighty Transformers and Instructors.

"TE siyák'om," the sun, was not addressed in prayers or petitioned by the StsÉélis, as far as my informants were aware; but some of their "wise" men could "tálemít" or "sīwél" him in cloudy weather by uttering certain of his mystic names, and the day following would be fine and bright. François claimed to be one of these "wise" men and offered to sell me his knowledge for a consideration.

The StsÉélis observed certain first-fruits ceremonies. For example, when the "sockeye" salmon (*Oncorhynchus Nerka*) "run" commenced, the first one caught was always brought to the chief, who called all the people together for prayers and dancing. Only the chief himself prayed, and my informants could not tell me the tenor of these prayers, as they were never uttered aloud, they said. During the prayers everybody must shut his eyes, and certain of the elders were appointed to see that this rule was strictly kept. Closing of the eyes during incantations or magic performances was, among the Salish, an essential feature of the act, the non-observance of which always caused failure. These eye-watchers held long wands, and struck anyone with them who opened his eyes during the ceremony. The salmon was afterwards cooked, and a small piece of it given to each person present. This ceremony was only observed in the case of the "sockeye" salmon which the StsÉélis regarded as the prince of salmon. It is worthy of remark that the Sk'qómic people held the "Spring" salmon (*Oncor. tshawytscha*) as the "first" of salmon.

Another of these ceremonies was kept in connection with the "sátskē," or young succulent suckers of the wild raspberry (*Rubus Nutkanus*), which the Indians of this region eat in large quantities, both cooked and raw. When cooked, I am told they eat like asparagus. The time for gathering these was left to the judgment and determination of the chief. When ready to gather, he would direct his wife or daughter to pick a bunch and bring them to him; and then, the people all being assembled, a ceremony similar to that connected with the salmon, would take place. After the ceremony anyone might pick as much as he liked. A similar ceremony took place later in the summer, when the berries of this plant were ripe.

As far as I could learn, these were the only ceremonies of the kind observed by the StsÉélis. There was none, they said, in connection with the autumn root-gathering.

Hunting, fishing, berry, and root grounds were all common to the whole tribe. One family or group had no more privileges in this respect than another. All the institutions of the Salish are essentially democratic in spirit.

Concerning the meaning and object of these ceremonies I have been led to the opinion by my studies of the Salish and other tribes that they were always *propiti-*

atory in intent. They were intended to placate the spirits of the fish, or the plant, or the fruit, as the case may be, in order that a plentiful supply of the same might be vouchsafed to them. The ceremony was not so much a thanksgiving as a performance to ensure a plentiful supply of the particular object desired; for if these ceremonies were not properly and reverently carried out there was danger of giving offence to the "spirits" of the objects and being deprived of them. The myths which speak of the first coming of the Salmon, which are thought to have their tribal homes in the "Salmon Isles" of the West, make this quite clear. In the compact made by Qals on behalf of the Indians and the salmon chief, the Indians are pledged to treat the salmon according to the instructions of this chief; and although it is not expressly stated in these myths that prayer should be said, or certain ceremonies performed, on the annual arrival of the salmon, as far as I am aware, yet I think there can be no doubt that the object of them is the propitiation of the salmon "spirits." For it must be remembered that, in the mind of the savage, the salmon, or the deer, or the berry, or the root, was not merely a fish or an animal, or a fruit, in our sense of these things, but something more. The Indian's view of the universe was essentially an *anthropopathic* one. All things in it were formed on man's lines as far as power to think, to do, and act, was concerned, and animals were not regarded as lower in the scale of life than himself, but rather the opposite, being more wonderful and "mysterious" in their ways, and able to do many things that he could not. And as it was with the salmon ceremonies, so it was with the others; and a close study of the hunting customs of the old-time Indians of this region makes it quite clear to us that many at least of those taboos and restrictions placed upon the killing or eating of certain animals or parts of them by themselves, and by primitive man the world over, find their best and truest explanation in these acts of propitiation.

SHAMANISM.

The Shaman was as important a person among the Stse'élis as among other tribes of this region. There appear to have been three kinds or classes of these, the "cwolám" or *doctor*; the "siwél" or *ghost-layer* and *magician*; and the "seúwa" or *witch*. The last-named was generally a woman, the two former invariably men.

I learnt nothing new concerning the functions of these individuals from the Stse'élis, such information as I gathered being in line with that I have recorded in former reports.

DWELLINGS.

The Stse'élis used both the communal long-house and the semi-subterranean winter skúmél. The former varied in length according to the nature of the ground and the number of the inhabitants. The site of one which was pointed out to me by one of the old men, who lived in it as a boy, extended above 300 feet along the bank of the river. The width of these houses among the Stse'élis was invariably

four "fathoms." They were of the half-gable or single roof pattern. The pitch of these roofs was so low that they could be used as platforms, and on public occasions were often so used. The houses had doors along each side sixteen "fathoms" apart. Those in the higher wall were considered the "front" doors, those in the lower the "back" doors. Outside the latter was thrown all the dirt and refuse of the house. Thus were the "kitchen-middens" formed. The interior of the building was divided into eight-fathom sections, each of which was usually occupied by four families or groups, two on the upper and two on the lower side. Each group had its own fire. There were no divisions of any kind, according to my informants, between the groups, not even the hanging mats usually found in these communal dwellings. Those inhabiting the "corners" near the doorways were protected and sheltered to some extent by a wooden screen or wall which ran from each side of the door about two yards and a half into the building. Except for this the structure was open from end to end, and all the inmates within sight of each other. Privacy of any kind was therefore a thing unknown and apparently undesired. The higher side of the building was considered the more honourable, and the chiefs and wealthy men of the tribe usually lodged on this side. The walls all round the inside were covered with reed mats or hangings to keep out the cold and draughts.

In grouping the inmates those inhabiting the same section were usually blood relatives, or those between whom marriage was prohibited. Commonly three or four generations of the same family would be found grouped together, or a father and his married sons.

Light had access to the building by means of the smoke-holes, which were opened during the day and closed at night. This was effected by pulling down or shoving up, as the case may be, one or two of the slabs of which the roof was formed. Along the walls on each side platforms, some 3 feet in height, extended from door to door. These, covered with mats and skins, formed the beds and lounges of the inmates. The space beneath these platforms was used as store cupboards for the house fuel. Above, over the platforms, hanging shelves were erected. On these were stored away the food supplies of the household. On the ground within the family circle several cedar chests or "treasure-boxes" lay about. These contained the blankets and other "wealth" of the family.

The "sk    l," or winter dwellings, were similar to those of the interior Salish, which have often been described. Nothing of them now remains but the saucer-like depressions in the ground. Of these I observed some half score near the site of the present village of Sts    lis. The diameters of these varied from 25 to 30 feet. These "sk    l" were occupied by the people from about the beginning of January to the end of March, the three "cold months" of this region.

HOUSEHOLD UTENSILS.

The household utensils of the Sts    lis appear to have been much the same as those of the neighbouring Salish tribes, except that they used a cedar bucket

("skwāwos") for carrying water instead of the usual basket. This bucket was formed from a single piece of thin cedar, the four sides being turned up and the angles made to overlap and then fastened in this position. In addition to this they had the usual assortment of baskets, of wooden platters and spoons and large cooking troughs (*s'úma*, the *scúma*, of the Lower Fraser tribes). They served their food on circular mats of cedar basketry, some of which were beautifully decorated with coloured barks and grasses. I saw one of these in the house of one of the "old-timers."

They obtained their fire in pre-trading days by means of an apparatus called in the native tongue "cél-sup." This was the common fire-drill of this region. It consisted of two pieces of wood, a drill which was twirled between the palms of the hands, and a flat piece of willow which had a pit in it to receive the point of the drill. The dust, generated from the soft willow-board by the friction of the drill, took fire after a few minutes' work. The fire was caught in a wad of "slówi." It would smoulder in this for a long time and could easily be carried about.

DRESS.

The clothing of the old-time Stsēélis consisted of garments made from dressed skins and from "slówi." The latter is the inner bark of the cedar (*Thuja gigantea*) beaten till fine and soft enough to roll into yarn. This "slówi" served many useful purposes. Besides weaving it into garments they used it as napkins, wash-cloths and pads, and in numerous other ways. The skin garments were usually made from deer-hide. This for a woman was fashioned after the manner of a long loose smock extending from the shoulders to the knees. It was called in the native tongue a "lákwa." For a man it took the form of a shirt and was so called, the native term "tseétsum" meaning a shirt. It was also tied in at the waist by a belt, while the smock of the women was worn loose. Besides these smocks the women wore a kind of breeches ("skéūs") of the same material. The men, according to my informants, wore leggings only, not breeches, nor breech-cloths.

Usually both sexes went uncovered as regards headgear, but commonly wore moccasins on their feet made from cariboo-hide.

Not every woman possessed garments of deer-skin, only those of the wealthier families. The wives and daughters of poor men had to content themselves with garments of "slówi."

These consisted of a cape ("lāpos") worn over the shoulders and reaching to the waist; and a shirt ("t'kwáluk") fastened to their middle and extending to the knee. Their lower limbs were otherwise bare.

In cold weather, those who possessed them, further protected themselves from cold by wearing skin garments with the fur still upon them.

On state and festive occasions such as the winter dances they sometimes wore blankets. These in pre-trading days were woven from the hair of the mountain-

goat, or from a species of dog they bred for the sake of its long silky hair. But usually blankets were not regarded as garments or bedding. They were the measure of a man's wealth.

They appear to have been the native standard of value, because, I suppose, of the difficulty in getting them, and everything was valued at so many blankets.

It was the ambition of most men to amass a number of these and then distribute them by means of the potlatch, and so acquire social distinction and make a profitable investment at one and the same time.

THE QUARTERS OR CARDINAL POINTS.

My investigations among the Salish have thus far revealed nothing resembling a "Cult of the Quarters" among them, such as is found among some of the tribes to the south. Indeed, no two divisions of them appear to have common terms for the cardinal points; and if they entertain any definite ideas respecting them, these will be found to be topographical rather than religious. Among the StsEélis this is certainly so, thus:—

<i>North</i> , chéó,	"up the river."
<i>South</i> , tlātlās,	"down the river."
<i>East</i> , temēwópets te sīyák'om,	"from whence rises the sun."
<i>West</i> , lactutsōks te sīyák'om,	"where disappears the sun."

WINDS.

It is much the same with the winds. The prevailing winds among the StsEélis are those that blow up and down the river, that is, north and south, and are called respectively "sātetc," and "tel tlātlās."

On the east and west are lines of lofty mountains which act as barriers to the winds from these quarters, consequently there are no east and west winds with them.

THE YEAR.

The StsEélis divide their year in a manner quite peculiar to themselves. It begins with them in autumn about our month of October and is divided as follows:—

<i>October</i> , tem pák'uk,	"spring-salmon spawning season."
<i>November</i> , tem kwálōq,	"dog-salmon spawning season."
<i>December</i> , tem métla, or smētlās,	"dancing season."
<i>January</i> , tem t'sélewetel,	"season for putting paddles away."
<i>February</i> , tl'kátses,	"fifth."
<i>March</i> , t'qúmes,	"sixth."
<i>April</i> , tsaukses,	"seventh."
<i>May</i> , t'kátsās,	"eighth."
<i>June</i> , tōqes,	"ninth."
<i>July</i> , āpāles,	"tenth."

Here the count ceases and the interval between the end of July and the beginning of October was termed "umtsēmukseL," which signifies the coming together or meeting of the two ends or points of the year. The latter portion of this interval was known also by the term "tēm yáauk" = *time of the dying salmon*, so called because the creeks at this time of the year are full of dead and dying salmon. Salmon always die after spawning, hence the term.

LINGUISTICS.

As the Stseélis and Skaúlots tribes speak dialects of the Halkōmēlēm language, the grammatical structure and peculiarities of which I set forth, together with lengthy glossaries, in my treatment of the Teil'qéuk and Kuántlen dialects of this division,¹ I have not thought it advisable to cumber this report with a second examination of this language as spoken by the tribes under consideration, as it must necessarily be to a large extent a repetition of what has been given before. I merely give here examples of continuous text in the two dialects, and add the names given by the Stseélis to the different species of salmon that frequent their waters, because they differ in several instances from the corresponding terms in the neighbouring Teil'qéuk and Sk'aúlots; and the numerals and personal pronouns, because they afford, in comparison with those of the Teil'qéuk and Kwántlen given before, a very fair example of the kind of differences which exist in the different Halkōmēlēm dialects.

The phonetics employed in rendering the native terms in this report are the same as those used in my former reports.

Native names of salmon in Stseélis:—

spring salmon, skwéqum.

<i>sock-eye</i>	„	tsékē,	when spawning called "Kwātcēwīa" or "Skwaiyūq."
<i>cohoe</i>	„	kōkwats.	
<i>dog</i>	„	kwālōq.	
<i>hump-back</i>	„	hōlia.	
<i>steel-head</i>	„	kēúq.	

NUMERALS.

1. lútsa.	12. ápel kas tē isála.
2. isála.	20. ts'kwih.
3. tlēq.	30. tluqetlcá.
4. haásel.	40. hūtsetlcá.
5. tl'k'átsis.	50. tlukutsetlcá.
6. t'qum.	60. t'qumetlcá.
7. tsauks.	70. tsuksetlcá.
8. t'kátsa.	80. t'kutssetlcá.
9. tōq.	90. tōqwetlcá.
10. ápel.	100. létsowits.
11. ápel kas tē lútsa.	1000. ápel létsowits.

¹ Report on the Ethnological Survey of Canada. B.A.A.S., 1902.

PERSONAL PRONOUNS.

<i>I,</i>	áels,	selective form, te áels.
<i>thou,</i>	lóa,	" " te lóa.
<i>he,</i>	tetsá.	
<i>she,</i>	setsá.	
<i>we,</i>	tl'lémétl,	" " te tl'lémétl.
<i>you,</i>	tl'lówop,	" " te tl'lówop.
<i>they (masc.)</i>	yetsá.	
<i>they (fem.)</i>	yetcá.	

The native texts will be found under "Myths and Traditions." Perhaps I might add here that a comparison of the texts of the Halk'ómélem dialects shows us that, although the vocabulary differences, when allowance is made for certain permutations, such as the "n" for the "l," are not very great, the form and order of expression differs more or less in each tribe. So much is this the case that a Stseélis Indian has difficulty in understanding a member of the Kwántlen tribe when speaking. I feel justified in saying these texts are as perfect as they can well be written. I read them to different members of the Stseélis and Skraúlit bands, and all expressed themselves as satisfied with their correctness, and showed they had no difficulty in understanding every word. Those who could read in English read them fluently.

MYTHS AND TRADITIONS.

Story of the man who restored his dead wife to life.

Related by François of Tseélis.

Stá-tsa te qólmūq, tla-sō steaukq te-láletsā swéeka lákwa kwilátel; te
 There-were a people, and-then marry one man lived together; the
 slále aúa-lēs yehéts ke-lótl kákai, tlā-li-sō kai, tlā-li-sō kélumtem, tlā-sō
 woman not long after sick, and-then she died, and then he put-her-away, then
 le kwaiétset te swéeka qehátsel silálem; kaiátl kwélstemet
 he trained for supernatural power the man four years; after talk-to him
 te súlias: "Wa-slumets-tūq kw's sâm kwa-qetselátl tla-tea sō mēs
 the sulia-his: "If jump-over-you a bone four times successively it will then become
 áiyilūq." Tlā-sō éméc me-tauk^a; tlā-sō kwáte-lōq-wes te sâm, tlā-sō
 alive." Then he walks he comes-home; then saw-he-it a bone, then
 slumets-tes heqetsátl tlā-si-sō me áiyilūq, tla-li-sō le éméc te
 steps-he-over-it four times and-straightway-it becomes alive, and-then it walked the
 sméyits, le áiyilūq-lōq-wes, tlā-li-sō éi skwálawols. Au-kwáte-lōq-wes, te
 deer he had-restored-it-to-life, and-then glad heart-his. Again-saw-he-it a
 sâms qéekwilok, au-kelát slumets-tes au-qetselátl, tlā-li-sō le
 bone-of little-bird, again-a-second-time steps-he-over-it again-four-times, and-then it
 áiyilūq te qéekwilok. Tlā-sō me átauq qolám's-tes te qolés te
 becomes-alive the little-bird. Then he went river-wise to place where the

stálicetl, tlā-sō ME qātāk-tes TE stálicetl tlā-li-sō yōkiyastes, tlā-li-sō
deceased-wife, then went took-down-he the deceased-wife and-then untied-her-he, and-then
slúmets-tes TE qetselátl tlā-sō ME áiyiluq-lōq-wes, tlā-sō ME
stepped-over-her-he four times and-then went and-brought-her-back-to-life-he, and-then went
taúkstōkes. Tlā-sō kwátc-lōq-wes yesá te'-wa-te'-mela. K's-es-wetl wéyil
home-they. Then saw-her-they they whose-child-she-was. On-the-following morning
tlā-li-sō éi ME skwálawols, le ye-tcétstem TE cwélis TE slálē; tlā-se-sō
then glad became hearts-their, they-told-them the parents-of the woman; and-then
ME kwátc-etes TE mélas átltel. Tlā-si-sō tcétstem átltel: "Qolē-teap-á
came to see-they the daughter-of them. And then said he to them: "There-you-awhile
qāls ME yúmçet TE mela-çlep, tōq-teap-tea ME kwátc-tep ō mēs
is not become strong the daughter-your, later-you-shall come see-you when becomes she
yúmçet." Lōtl ME yúmçet kaiyétl le kwátc-etem TE cwélis.
strong." After-had become strong then they saw-her the parents-her.
Au-kákai TE tcauks tau-láletsa swéeka le sau kai, tlā-sō le kélemtem, tlā-sō
Again-sick the wife-of another man she also dies, then he put-her-away, and-then
le p'támetes tátsel swéeka qolés kwél swéyil kwas le háhāk-ōm. Tlā-li-sō
he asked other man there how-many days was he bathing. And then
tcétstem háqetsel swéyil qolés le háhāk-ōm, tlā-li-sō lām kwaiétset;
he told him four days there he bathed, and then he went { to train for
supernatural power } ;
tlā-li-sō tes TE háqetsel swéyil, tlā-li sō háiya, tlā-sō ME tauq ME tes
and stayed four days, and then finished, then he went beach-ward came to
qolés TE stálicetl, tlā-sō ME qitáktes, tlā-sō yōkiyastes, tlā-sō ME
where the deceased-wife, then he went took-her-down, then untied her, then went
taúkstōkes qā-mé TE lálems, tlā-sō ákutstōqes le TE swáqets, tlā-sō étut
took-her-home to the house-his, then he-laid-her-down on the bed, then slept
skū TE spalakwétsa. Wéyil tlā-sō kwátelemet TE sqélas TE
along-with the corpse. On-the-morrow then saw-they the feet-of the
spalakwétsā, keútsa stūqtéuq; tlā-si-sō s'kútem TE stl'kóetel, tlā-sō ME
corpse, they-were swollen; and-then pierced them with an awl, then came
kwetl TE slos kes TE mútsetl. Tlā-sō qét-temet siswéeka, "Qétsitla!
oozing-out oil and matter. Then they-woke-him that-man, "Wake-up!
spalakwétsa TE sēte," tcétstem ts'ū siswéeka; tlā-sō amút tlā-sō
corpse your bed-fellow," they say to that-man; then he-got-up then
kápetel,¹ tlā-sō le kélemtem TE spalakwétsa.
they-tie-up, then they put-away the corpse.

¹ Mary Anne said that François had employed the wrong term here. *K'utsúletem* is the word he should have used. *Kápetel* means to tie up anything, but *K'utsúletem* is used only in connection with a corpse.

MYTH OF THE MAN WHO GAINS POWER TO RESTORE THE DEAD TO LIFE: A FREE
TRANSLATION OF THE ABOVE.

Once there was a large village, and among the people who lived in it was a certain man who had a wife whom he loved very much. One day she fell sick, and shortly after died. According to the custom he put her corpse away in a tree, and then went off alone into the mountains to train for *súlia* (supernatural helpers). He remained there undergoing his ceremonial washings and bathings summer and winter alike for four successive years. After this period had elapsed his *súlia* came to him in a vision and communed with him thus: "I will give you power to restore the dead to life. If you see a bone lying on the ground and you step over it four times the body to which the bone belongs will straightway be restored to life." The man now set his face homeward. As he went he saw a bone in his path. "I will test my powers," said he, and therewith stepped over the bone four times. No sooner had he done so, than a deer arose, and walked off alive into the woods. Then the man felt glad and rejoiced at his powers. Again a second time he perceived a small bone on the ground before him. He steps over this in like manner four times, and behold a little bird arose alive and flew away. Satisfied now of his power he directed his steps towards the spot where the body of his wife had been put away. When he got there, he climbed the tree and took the corpse down, untied the fastenings about it, and then stepped over it four times. When he had so done, the corpse stood up and became alive again. Then he took his restored wife home to the village with him. It was night when they arrived and no one saw them enter. The next morning, when the people arose from their sleep, they were astonished to see the man with his wife alive and among them again, and they rejoiced and were glad. Some of them hurried off to tell the woman's parents of her restoration, and they came quickly to see for themselves. But the husband of the woman feared for his wife's health, and said to them, "Stay away a little while; your daughter is not strong enough yet to see you all. When she has grown stronger then shall you come and see her." So they tarried awhile in their own house till she had become quite well and strong again. Then they came and saw her, and were glad at her revival. Now it happened soon after that the wife of another man of the same village fell sick, and likewise died. After the corpse had been put away according to the custom, the man bethought him that he would go off and acquire the power to restore his wife to life again as his neighbour had done. Before he set out, however, he went to the other man, and asked him how long he had stayed practising in the mountains. He, with intent to deceive, answered that he was there four days only. The second man then went off and bathed and washed himself for the space of four days. He then returned home, and went to the place where his wife's corpse lay, took it down from the tree, untied the fastenings about it, and carried it home with him. It was night also when he arrived, and he laid the corpse on his bed, and lay down beside it. On the morrow when the people arose they saw that the man was lying

with the corpse of his late wife, the swollen feet of which protruded beyond her coverings. One of them pierced the feet with an awl, and forthwith there oozed out putrid grease and matter. They then roused the man, crying out to him, "Awake! you are sleeping with a corpse." Then he arose, and saw that it was as they had said, and knew thereby that he had failed to acquire the power to restore his wife to life. They then tied the body up, and put it away a second time.

The moral of this story seems to be to show that not every one could acquire "supernatural powers"; and that *silia* did not come to a man merely because he wished for them, but only after he had brought himself into *rapport* with them, so to speak, by long and arduous training and self-discipline.

TE temóqs TE Smestéuqsetl.

The Land-of the Departed.

Related by Mary Anne Tsíqémelwet, of Stséélis.

ONCE a man married a woman whom he deeply loved. They had lived together about a year when the woman became ill and shortly after died. When he had put her corpse away he went a long way off into the mountains to seek supernatural power. He bathed regularly every day through four summers and four winters. When he had thus done he attained supernatural powers. He could easily see the shades of the departed and even follow the trails they made. He sought and found the trail his wife's ghost had made on her way to the land of the smestéuqsetl.

He followed it day after day for many days. At last he came to a settlement where there was a long-house. Presently going in he saw the síam (chief) sitting there alone. The latter called out and asked him what he wanted, and what he was doing there in the land of the departed. "You are not a dead person; only the dead live here; why have you come?"

The young man replied, "I am seeking for my deceased wife. I loved her greatly and she left me too soon. I want to live with her again."

The chief felt sorry for him and promised to help him if he would do as he told him. The young man, thanked him, and promised to comply with all his wishes. Then the chief took him and washed him with a certain medicine and then instructed him on this wise. "You must now hide yourself, and if you see your wife, when my people come home, you must be very careful not to let her see you or attempt to grasp her. If you do, everybody will immediately disappear, and your wife will dissolve in your arms."

The youth promised not to let the dead people see him or to touch his wife. As it was now dusk and the síam was momentarily expecting his people to come home, he bade him hide himself. This the youth did, and presently saw a great concourse of people approaching. When the first one entered the house he began to sniff and said, "I smell a living person." "Nonsense," said the chief, "that's impossible; only the dead can come here." This satisfied the spirits, and they all

entered the building. Now all round the sides thereof were planted swing-poles for hanging cradles upon, and as soon as the people were come in the women hung up the cradles they were carrying on these poles.

They now began to dance, and after they had kept this up for some time, they then marched in single file round the house four times. The youth saw his wife in the line as they marched past the spot where he was hidden, and with great difficulty restrained his desire to spring forth and take her in his arms. Next morning at sunrise the spirit-people all disappeared. When they were gone the chief spent the day in washing and cleansing his visitor with strong "medicine." When the second night fell he hid the young man again and warned him not to be seen of the spirits or to touch his wife. Presently the spirit-people arrive, and as on the night before, they begin to sniff as they enter the house, and some cry out that they smell a living person. The chief again tells them they are mistaken, that no living person could possibly be there. Then they all enter and the cradles are hung up and the dancing begins. When this is done they march as before in single file all round the building. Again the young man with difficulty restrained himself from springing out upon his wife, so strong was his desire to hold her in his arms; but remembering his promise to the chief and the consequences that would follow his action, he kept himself hidden. Next day the chief washed the youth again in his "medicine," and when the spirits returned that evening they entered without hesitation or remark. When they were marching round the house that night, the desire to take his wife in his arms was too strong for the young man to resist, and as she passed by him, he sprang out and caught her. No sooner had he done so than she and all the other people disappeared, babies and cradles and all, and he was left grasping nothing but the empty air. The chief chided him for his lack of self-restraint, and told him he should have waited one night longer. Next day he washed him with his "medicine" again, and in the evening the spirit-people returned and entered the house as usual. Again they danced and marched round. When they had just completed the fourth round the young man, acting on the advice of the chief, sprang out and seized his wife, and this time she remained in his arms, nor did any of the other spirits disappear. The chief immediately threw some of his "medicine" upon the man and his wife, and this enabled them to remain together. Next day the wife stayed behind with her husband when the others went out. During the day the chief spoke on this wise to the man: "To-morrow your wife will be strong enough to begin the journey with you back to the living world, but if you wish to get home again with her you must be careful to follow my instructions. You must on no account seek to enjoy your marital rights, you must not even lie near her. Camp early each day and light a big fire before sunset, and keep it burning well all through the night, and you sleep on one side of it and let her sleep on the other."

Next day he sent them away and gave them a great quantity of provisions for their journey, and many blankets and skins, and two horses to carry them. Towards evening the man pitched his camp, laid in a large quantity of wood and

lit a big fire; and after they had eaten they laid down to sleep through the night on opposite sides of the fire as the chief had advised.

Next morning they found their provisions and other gifts had been doubled in the night, and they now had four horses, and twice their former quantity of everything else. This they packed on the spare horses and set off again. For many days they thus travelled, each night making a big fire and lying on opposite sides of it. As each new day broke, they found two additional horses among the others, and new possessions enough to make them big packs. After a long time had elapsed, and they had come far, they neared their home and camped one day's journey out. This was on a wide stretch of prairie-land. By this time their horses had multiplied sufficiently to nearly fill the whole prairie, and all were well laden with stores of food and skins and blankets. The people of the village on perceiving next morning this great company of horses, sent two young men out to see what it meant, and to learn who was coming.

When they came up with the man and wife, they ask who he is, and where he is going.

He tells them he is the man who formerly lost his wife, and went to seek her in the land of the dead. They hurry back and tell the chief who he is. He asks, "Has he got his wife with him?" "Oh yes," they reply; "we saw her with him." By the time they reached the village, a similar period to that which he had spent in looking for his wife had elapsed, and she was now grown strong again, and accustomed to the contact of living people, so there was no longer any need to keep apart, and thereafter he lived with her as before her death. He was now a wealthy man and gave many feasts.

Not long after his return, a second man lost his wife. After he had put the corpse away, he came to the first man, and asked him how he had recovered his wife. He related the whole circumstance, keeping nothing back; whereupon the other determined to set out and train for supernatural power in like manner. He did so, and at the end of the fourth year, set off on his deceased wife's spirit trail. In course of time he arrived at the village of the ghosts, and was treated by the chief as the other had been. On the fifth day his wife being restored to him, he set off homewards with her, and duly followed the chief's instructions until he reached his last camping place on the prairie just outside the village. As with the other man, so it had been with him; his horses and his provisions and other belongings had multiplied on the journey; and he, too, now possessed great wealth. But on this last night he failed to observe the instructions that had been given him, and lay with his wife and had intercourse with her. When he awoke next morning he found himself lying all alone on the bare ground, with no sign of wife, or horses, or other possessions to be anywhere seen. Thus did he suffer for his lack of self-restraint.

There is an obvious moral here.

MYTH OF KAÍAM THE WOLVERINE, AND THE SALMON SPAWN GIRLS.

Related by Francois of Stsélis.

Kaíam lived at Tseátsta (now Silver Creek). One day she came down the river to get a Kókwats ("coho" salmon). Having caught one, she took it home with her. As soon as she got back she set to work to clean it, and take out the kéleq (*the roe or eggs*). As she washed them she heard a sound like a child's cry. The sound came from the salmon roe, each half cried like a child. She took them into the house, and in a little while they developed into two big girls. When they were grown up, Kaíam became ill, and told the girls she was going to die, and instructed them to take her dead body, wrap it in her blanket, and place it in her canoe and leave her thus. "When you wrap me up," said she, "be careful to put my hammer and horn and wolverine skin, and my paint and mica-dust inside my blanket." This they promised to do. Shortly after she died, as the girls thought. In reality, she was only shamming death for purposes of her own.

They wrapped her up in her blanket and put the articles she had named inside, and then laid her in her canoe on the river, and went home to mourn. When the old woman found herself alone, she drew back the loose and wrinkled skin on her hands and arms up under her arm-pits. In like manner she drew up the skin of her legs, and also smoothed back under her hair the wrinkles of her face. Then she painted herself after the manner of young men, and took the horn and hammer and put them between her legs, and made of them a man's penis and testes. Then she took her canoe and went to where the girls were performing their mortuary ablutions. As she paddled by, she said to them in her character of a young man, "Is it true you have lost your grandmother?" They reply that it is, and invite him to land and come home with them. She does so, and now the girls quarrel between themselves, whose husband of them she shall be. She enters the Skúmel (*winter underground dwelling*) with them, and they lay a pile of mats for her to sit on. The last mat laid down belonged to the younger girl, so she therefore takes preference over her sister. They now prepare a meal for the seeming young man. But as their visitor was really an old and toothless woman, and she could not properly chew her food, she had to hide her face when she ate. This she did by holding one arm up before her mouth. After she had eaten her full, she went outside, and the two girls finished the meal.¹ By this time it was night, and they lay down together, she seeming young man lying between the two young women. During the night she had intercourse with both of the girls, first with the younger, and then with the elder. The next morning the girls went out to bathe, and as they were bathing the elder asked the younger if her vulva was not swollen and painful. Her sister replied that it was, and that she believed they had been deceived, and that this seeming young man was not really a man at all, but only their old grandmother disguised as one.

¹ Among the Indians in the old days the women never ate with the men, but waited upon them, and finished what they left.

Said the younger, "We will test her to-night; you lie on one of her arms, and I will lie on the other, and then we will tickle her, and make her laugh. When she laughs, we shall easily tell whether she is what she seems to be, or only a miserable deceiver." When they retired that night, the girls did as they had planned, and gave their bed-fellow a good tickling. Soon the old woman began to laugh, and her cracked tones revealed the voice of their grandmother. They continued to tickle her till she cried out for mercy, and confessed the trick she had played upon them. Then they dragged her out of bed down to the beach, tickling her as they went. There they tickled her till she died. As she was dying they said to her, "Hereafter when people tell of your trick, and how we served you, the weather will always become calm on the lake."

After this incident, the girls went up the creek. In course of time they came to a dwelling in which lived an old blind woman and her daughter. The latter was from home when the two girls arrived, but her baby was hanging in its cradle from the spring-pole. The old woman cried out when the girls entered, "Don't come too close if you belong to the shore people." "Whose baby is that?" said one of the girls. "Where is the mother of it?" "It is my daughter's; she has gone out swinging," said the old woman. The child was crying all the time, and the younger of the girls said, "I don't think you wash the child often enough, it wants washing badly." The old woman replied, "I can't get any water; I can't see; I am blind." Then the girls said they would wash the baby for her; and therewith took it out to the stream. Presently they pretend to bring it back, but instead of the baby, they really put a small log in the cradle, and make off with the child.

After they had been gone some time, the old woman found out the trick they had played upon her, and called out to her old husband, Skwáskwustel (= "cooking-stone") to come home. He is down the creek fishing for salmon, and does not at first hear her. By-and-bye her shouts reach him, and he goes home to see what is the matter. The daughter arrives also about the same time, and the old woman tells them what has happened.

"Carry me on your back, daughter, and we will go after the women who stole your baby," said the old woman. This the daughter did; and they thus set off together in pursuit of the girls. As they went the old woman used her magic power so effectually that they speedily caught up with the girls.

When the daughter saw them, she threw her old mother aside, and ran to seize her baby; but as soon as her mother was off her back, the path lengthened out again, and the girls and the baby were a long way ahead. She went back to her old mother and again took her on her shoulders. Said the old woman to her, "Keep me on your back, daughter, until you are quite close to the women." But the daughter, when she again came up with them, was too eager to seize her baby to heed her mother's instructions, and threw the old woman aside a second time; whereupon the trail lengthened out between herself and the women as before, and she lost sight of them again. She now became very angry, and took up her old

mother and threw her on a log and said, "Stay there and hereafter become roots for people to eat." Then she went home and took the old man down to the creek, and threw him into the water, saying as she did so, "Stay there, and become a stone for the salmon to hide under." After that, she went home and took her child's garments, and began to wring them out. As she was doing so, she heard an infant's cry. This came from a child that had come into existence from the urine she had wrung from the garments of her lost child. By this time the stolen child had grown to manhood, and the second child, who was also a boy, was quickly growing into a strong youth. One day the elder brother went out hunting mountain goats, leaving the two women, whom he had taken for wives, behind, with the two children they had borne him. Now it so happened that the younger brother had also gone out hunting in the mountains, and both had taken the same direction, and in the course of their hunting, fell in with each other, and sat down to eat together; the elder first invited the younger to eat with him, and then the younger returned the compliment. When they had secured their game they parted, the one going home to his wives, the other to his mother. The latter told his mother of his encounter with the stranger in the mountains." "Ah," said she, "I suspect that is your elder brother who was stolen. If you meet him again, you must propose to gambol together, and then look well at his arms when he bares them to play, and see if there is a mark just above the elbow of the right arm." Soon after, both brothers got out hunting again, and come together a second time. They eat with each other as before, and after their meal, the younger proposes they shall gambol together. The other consents, and when he bares his arms, the younger perceives the mark which his mother had spoken of, as being on his brother's arm. As soon as he saw it, he cried out, "You are my lost brother. I know you by that mark on your arm. I have asked you to gambol purposely that I might find out whether you had that mark on your right arm. My mother said you were carried off by two girls when you were a baby, and when she heard I had met a man in the mountains, she suspected that you were her stolen child and my brother." When the elder brother heard this, he said, "I will go home and punish my wives for their wicked conduct, and then I will come back here and meet you again, and you shall lead me to my mother." They then part again, the younger going back to tell his mother that the stranger was really his lost brother, and the elder to punish his wives for their wickedness.

With this end in view, he gathered a large quantity of pitch, and when he got home, made a big fire and burnt up the two women. But before he put them into the fire, he placed a quantity of white hair in the bosom of the younger, who was the good-natured one, and a similar bundle of black hair in the bosom of the other, who was bad-tempered and mean. From this circumstance, it came to pass that the ashes of the younger were transformed into the light fleecy clouds of summer, and those of the elder into the dark and lowering clouds of winter; and the child of the younger became the bright and friendly robin, but that of the elder the dark and croaking raven; while from the sparks of the fire a flock of

little "snow-birds" arose. This done, the man set out to meet his younger brother, and when they met, the two went home together.

Soon after their return, the mother thought she would set the elder son in the sky, to see if he was fit to be a sun to light up the world. Accordingly she placed him in the heavens. Next morning he shone out bright and clear, but before she decided to let him remain there, she resolved to test his powers. So she took the napkins she had used when her sons were children,¹ and spread them out in the sun. Thereupon the sun's light paled and faded, and looked like that of the moon.

Then she called him down, and sent his younger brother up in his stead. The younger was called *Skwūmtcēt* (meaning unknown). She tested him in like manner, but the napkin could not dim the brightness of his light, so he remained there and became the sun. The elder brother she now placed in the night sky, and he became the moon, because his light was pale and white. Said she to the younger, "You take care of people by day," and to the elder, "You look after them at night." Thus came the sun and the moon.

In the narration of the latter part of this story, "Mary Anne" disputed the correctness of François' version, and said she had always heard it told otherwise. She gave her version, which is as follows:—Instead of burning his wives, the man wrapped each in her blanket, and then took them down to the lake and said to them, "Go, wade into the water until it is over your heads, then jump up and plunge down again like sturgeons." The women waded into the water and endeavoured to do as he had bidden them. The younger succeeded, and became thereafter the sturgeon, the elder failed to jump up, and so became the "sucker." Then he went back to the house, and transformed his children into "snow-birds." After that he meets his younger brother, and goes home to his mother. Then both bathe in the creek, after which they retire for the night. Next day the younger one sits by the fire, and the heat causes him to dissolve into the urine from which he had sprung. "Mary Anne's" version does not say what became of the elder brother, but concludes with the dissolution of the younger. Thus one version accounts for the creation of the sun and moon, the other for the sturgeon and sucker.

STORY OF SKAÍAQ THE MINK.

"Grandmother," said Skaíaq, "you say my father is the Sun?" "Yes, grandson," replied the old woman, "the Sun is your father. He is my elder brother" (*Sútlatēl*=elder brother or cousin.) "I want to go and see him," said the grandson. "You cannot do that," answered the old woman, "he is too far off. "I

¹ It was formerly the custom among the Indians of this region to take the napkins and cradle in which a child had been reared and place them in a bush or tree in the forest, when the child had outgrown their use. Hence her possession of these napkins, which she must have fetched from their hiding place in the forest for her purpose. Among primitive peoples, and particularly among the Indians of this district, excrement and urine were regarded as possessing extraordinary power. See instance of this in the story of the girl who was carried off by an owl, given below.

don't care how far off he is, I am going to see him," said Skaíaq, and he thereupon sets off to visit his father the Sun. When he got near to the Sun, the latter, perceiving him, cried out and said, "Is that you, son Skaíaq?" "Yes, father," replied he, "I have come to visit you." Now the Sun's wife would not look at Skaíaq, and he wondered why. The next morning the Sun said to Skaíaq, "Don't put anything on the fire that crackles and sends out sparks." But the first thing that Skaíaq did was to go out and gather wood that crackled and sent out sparks in the burning. First he went to the alder tree and asked, "Do you crackle when you burn?" "No," said the alder tree. Then he went to another, and asked the same question, and to several others, receiving the same replies. At last he questioned the cedar tree, which answered, "Yes, I crackle and throw out lots of sparks." Skaíaq thereupon gathered some cedar, and took it home. His object in doing this was to get a look at his father's wife's face. She was the Thunder and Lightning. Now she had kept her face hidden from him lest he should be burnt and scorched to death by her glances. When the cedar began to crackle and shoot, she turned round to see what was the matter, and Skaíaq was instantly shrivelled up, only his skin and bones remaining.

When the Sun, his father, came home that night he saw the remains of his son, and asked his wife what had happened. She told him what had occurred. Thereupon he steps over his son's bones four times and Skaíaq is restored to life again. He gets up, scratches his head in an amused manner, and remarks to his parent in casual tones, "Dear me, I must have been asleep a long time, I didn't know you had got back." His father said to him, "I cannot trust you to stay at home, you shall take my place to-morrow."

Next morning, Skaíaq received the following instruction from the Sun. "You must keep the day bright till about noon, then go behind a cloud for a little while; in the afternoon do the same again." Skaíaq promised to carry out his wishes. After sunset he returned to his father, who asked if he had done as he had bidden him. "Yes, I did exactly what you told me," replied Skaíaq. The next day he went out, and again a third day, and was careful to do as his father had instructed him. After the third day he said he was tired, and wanted to rest, so his father went out himself the following day. Before he left, however, he warned Skaíaq not to climb up on the rafters of the house. Skaíaq promised to comply with his wishes. But no sooner had his father the Sun set out upon his course than Skaíaq said to himself, "I wonder why he doesn't want me to go up there. I shall certainly climb up," and he straightway set about doing so. When he got among the rafters he saw the genitalia of a woman hanging there; and he had coition. When he returns to the ground again, he finds his step-mother dead. When the Sun came home that night, and saw his wife lying dead he knew that Skaíaq had disobeyed him and had caused her death. So he takes a club, and clubs him to death and throws out his dead body. Then he steps four times over his wife's corpse, and she is restored to life again. After some time Skaíaq also comes to life, and returns to his grandmother again.

MYTH OF THE OWL HUSBAND.

Related by "Mary Anne."

There was once a discontented little girl who cried to have her own way in everything. She used to cry every night when her mother put her to bed. One evening a Slálakēm owl came and carried her off to his house in a tree and kept her there till she was grown a big girl, and then took her to wife. She often thought of her home, and longed to be able to get back. One day she determined to try to do so, and sought how she might get down from the tree in which she lived with Owl. She begged to be allowed to go down in order to urinate. At first Owl would not hear of it, and told her to urinate where she was; but she importuned him so much, that at last he consented to let her down to the ground with a rope for a little while, telling her to call out to him when she was ready to return. As soon as she reached the foot of the tree she urinated, and bade her urine make reply to Owl when he called out, that she was not ready yet. Then she hastily set out for her parents' home and in course of time arrived there and hid herself among the rafters of the building. Meanwhile Owl got tired of waiting for her to call out to be taken up, and shouted out to know if she was ready. The urine called back, "No, not yet." Owl waited a little longer, and shouted again, "Are you ready?" "No, not yet," replied the urine. Again a third time he called out, and received the same answer. Then losing patience he told her to ascend at once or he would come and fetch her. As his wishes were not complied with, he went down himself to see why she did not return, and found that she had tricked him by means of her urine and gone off. Following her trail he came to her parents' house, and asked if his wife was there. They replied in the affirmative, and called out to her to come down to her husband. Said they, "You are still the same discontented person; you used to cry when you were put to bed, and now you have run away from your husband. Come down and go home with him." So the young woman came down and Owl took her back with him. But she objected so much to live any longer in the tree that he built her a house upon the ground, and they lived there. Some time after this she bore a child to Owl. Now she had a brother who was older than herself, whom she longed to see; so she sent a little bird to ask him to come and see her. One day being in his neighbourhood this little bird accosted the brother and begged that he would follow his sister's trail and pay her a visit. The brother promised to do so, and forthwith set out. He followed her trail, which made many turns, and at last arrived at Owl's home, and went in to see his sister and her baby. He stayed with her and hunted deer for some time. Besides this sister married to Owl, he had another at home with his parents. He wanted her to come and live with them, so he sent a message to her by a little bird. When she received the message she thought, "He is not coming back, I must induce him to come home again. If I take a nice-looking girl with me, and tell him he can have her for a wife perhaps he'll come back again." So before she set out to go to them, she

went to another girl in the village, and asked her to accompany her. She complied, and they set off together, and, following the trail according to the instructions she had received through the little bird, came in time to the house. When the two girls arrive it is arranged that they shall stay for some time. One day the brother went out hunting and shot several deer, and took home a small one with him leaving the remainder behind. When he gets back, he tells Owl what he has done, and asks him to go and fetch the rest of the deer. Now the youth by his "medicine" caused Owl's pack-strap to break whenever he was crossing a river. This necessitated his going back to get another deer, as he could not recover those that fell into the water. In the meantime the youth and the wife and sister set fire to Owl's house, and burnt it up with the baby in it, and then started off towards their father's village together. At last Owl gets back with the last of the deer which he has managed to bring safely across the river, and finds his house and all his belongings burnt to the ground. He also knows that his child has been burnt, by finding its liver, which was all that was left of it, among the ashes. Said he when he saw it, "They should not have burnt the child." On their way back the young people come to a lake. "Let us sit down here for awhile," said the youth, "and rest." They did so, and presently he said, "I want some water, I'll go down to the lake and drink." "No, let me fetch you some," said his wife. But he went himself, and walked out on a log that extended some way into the water. When he got to the end, he stooped down to drink, and as he did so he apparently slid off the log into the water and disappeared. The girls saw what had happened from the bank above, and rushed down and went out on the log to help him. But he did not come to the surface again. When they got to the end of the log, they looked down into the water, which was very clear and transparent, and plainly saw the bottom of the lake, for some distance round, but no sign of the young man's body. They waited a little while and then returned to the bank and sat down to cry. Presently one of them said, "I am afraid we shall never see him again, a *slalakum* must have carried him off, it is useless waiting here, we had better go home." They set off and in due course reach their village and relate what had happened; and when the young man's parents learn the sad news they grieve much over his loss.

Now in another settlement about fifty miles off there lived a very beautiful girl. She had many suitors for her hand but she rejected them all; none of them pleased her. When she refused them all her parents lost patience with her and scolded her, and asked her what kind of a husband she wanted, saying that none of the young men of the village was good enough for her. Feeling sore at heart at their scolding, she determined to leave her home and go away by herself. Accordingly one day she set off, and, after going a long way, she chanced to come to the lake where the young man had fallen in and disappeared. She stopped to rest here, and sat down on the bank, and presently began to sing. In her song she calls out the name of the common diver. This bird then appears and asks, "Do you want me? I heard you call." "No I don't want you," replies the girl "Why did you

call my name then?" questions the diver. "I didn't know it was your name; I always sing in that way," responded the girl. The diver then left her. Presently the girl began singing again, and this time she called out the name of the northern diver (*swákwel*.) Soon after a male bird of this species came up near her and asked, "Did you call me?" "No," replied the girl. "Why did you call my name then?" questioned he. "Is it your name I called?" returned she; "I didn't know it; I always sing in that way." The bird dived again. A third time the girl sang, and in her song called out the name of the *swákwel* again. This time a female bird rose out of the water, and asked the same question as before, and received the same answer. Now this third bird was wife to the youth who had fallen into the water, and disappeared in the lake. He had not been drowned or carried off by a *slálakum* as his sisters and wife had supposed. As the waters closed over his head this diver-woman had come to him and offered him a diver's skin, and persuaded him to live with her in the lake. He had complied, and had stayed with her ever since. But now when a fourth time the girl on the bank sang her song, and called out *swákwel*, he came to the surface and asked her if she had called him. This time she replies in the affirmative. He thereupon casts aside his diver's skin, and becomes a young man again, and takes the girl to wife. On the morrow they set out for the girl's home.

When they were getting near the young man said, "I don't want any of your people to see me. Is there any house I can stop at apart from the rest?" "No," replied the girl, "there are only four *skúmēl*,¹ and they are close together. There is, however, a small house on this side of the village where a man who has the leprosy (*skōm*) lives apart by himself, but you could not stop there." The young man makes no reply, but presently hastens on in advance of his wife, and when he comes to the leper's dwelling goes in and takes the man by the hair and shakes him so that his bones drop out of his skin. The young man then dons the leper's skin, and assumes the character of the leper. Presently his wife, who has followed his trail, and sees it lead into the leper's house, comes in and asks if her husband is there. "No," said the seeming leper, "nobody has been here." "That is strange," said the wife, "his tracks lead here and there are none leading out; he must be here." "No, he isn't," said the leper. But the woman is convinced that her husband is in the house, and for aught she knows to the contrary may even be this seeming leper, who seems so anxious to get rid of her, and she determines to stay there with him. Her presence in the house of the leper soon becomes known to the people of the village, and there are plenty to go and tell her parents of her disgraceful conduct, as it seems to them. Said they, "You ought to be proud of your daughter. None of the young men of the village was good enough for her, and now she is living with a miserable leper," and they scoff and jeer. When the girl's parents learn that their missing daughter is living with the leper, as they suppose, their hearts are filled with sorrow for her, and they send her a supply of food by her younger sister, thinking she must be hungry. When the little girl had

¹ Winter underground houses.

come and gone back again, the youth went out and washed himself in the creek near by, using the tips of spruce and balsam branches to scrub himself with; and as the needles fell off the branches they became transformed into ts'ákwe.¹ He took home a few of them, and told the girl to go to the creek and get the rest, and if her sister came again to give her some for her parents. Next day when her younger sister came again with more food she filled her basket with the ts'ákwe and told her to give them to her mother and father. When the old man saw his daughter's presents he said to his wife, "You had better go and bring our daughter and her husband home here." The mother goes to the leper's house and tells her daughter to come and bring her husband with her. The young woman thereupon takes the leper on her back, and "packs" him thus to her father's house. When the people of the village see her carrying the leper they mock and laugh at her, especially Raven, who cries out, "You've chosen a nice husband, indeed, after refusing the best young men in the village; I wish you joy of him." That night when all had gone to bed, the young man took off his leper's skin. His wife's little sister observed what he did, and took her elder sister's hand, and told her to feel her husband's body with it. She did so, and found his skin as smooth and soft and whole as her own, there were no sores or blotches to be felt. She knew now that she had not been deceived, and that he was thus disguised for some purpose of his own. But she held her peace and said nothing.

The next day the young man went out into the bush, and gathered all the deer for many miles round into one herd, and drove them into a gulch and hid them there, and then went home again.

A great snow-storm now came on, and the snow was so soft and deep that no hunting could be done, and the people began to suffer from hunger. The young man bade his wife tell her father to make him a pair of snowshoes, a fathom long and a half fathom wide. The father does so, and next morning the young man gets up very early, before anyone is stirring, takes off the leper's skin and goes out in his new snowshoes, and takes a big jump into the snow and back again, then puts on the leper's skin and returns to bed. The morning following he rises early, again fastens on his snowshoes, and sets off into the bush. Presently he came to a secluded spot, and took off the leper's skin and hung it in a tree, and went towards the gulch, into which he had driven and secreted the deer. Meantime, his wife had followed his tracks, and coming presently to the tree in which he had left the leper's skin, saw it hanging there, and took it down and returned home with it. She determined to destroy it. This she does by burning it in the fire. Said she, "He shall not shame me any longer with it. He is a finer-looking man than any of them, and I have no reason to be ashamed of

¹ Some kind of valuable treasure, which is only to be got ordinarily from the coast and which was very valuable, one being worth many blankets. I could not understand what this treasure was; only that it was "Something white with a hole in it," but not a shell of any kind.

him, as Raven shall see." While this was happening the young man was killing the deer, and making up the meat into four packs.

By his "medicine" he reduced the size of these packs to a very small compass, so that he could carry them all easily. When he got back to the tree, he could not find the leper's skin, and had to go home without it. He saw his wife's tracks, and suspected she had followed him and destroyed it. When he reached his father-in-law's Skúmēl, he left his packs on the roof and descended the ladder. When he gets down, the inmates are surprised to see a handsome young stranger, and wonder who he is; and when they presently discover he is husband of the girl who is supposed to have married the leper, some of them say to Raven, "You should not have been so quick to jeer at her, she has a fine husband after all."

The young man bids his wife tell her mother to clean out the Skúmēl, and her father to fetch down one of the four packs he had left on the roof, and distribute the remainder amongst the other three houses. This they do. When the old man untied the packs to let down the meat, it increased so much, that each house was nearly filled with it. The young man then bade the people share the meat equally amongst them all, and there was great feasting and rejoicing. Four times he supplied them with venison in this way.

His wife now presented him with a son. When the child got to be three or four years old, it began to cry incessantly night and day. The grandparents ask the mother why she does not stop the child's crying. She says, "I can't, he is crying for his paternal grandparents." At last the mother comforts the child by promising him that he shall go and see his paternal grandparents, and he stops crying. Now they make preparations for the journey. The young man and his father-in-law get in much bear and deer and goat flesh and fat, and the old woman and her daughter gather a large supply of roots. The stores of skins and blankets are opened, and a large number set aside for presents to the young man's parents and relations. When everything is ready, and packed in separate bundles, the young man uses his mystery power, and reduced the size and weight of the packs to such a degree, that the whole could easily be carried in the hand of one person. The old people now bid the young couple set off. So they say farewell, and start. Now since the young man had left his home, another son had been born to his parents, who was now about four or five years old. This lad the young man willed to meet him when they neared his parents' house. So when they reached the verge of the village, they saw the little boy shooting with his toy arrows.

The elder brother went towards him, and hid behind a bush, and when the younger came near to look for his arrows, he cried out and asked him what he was looking for. The younger replied, "I am looking for my arrow." "Is this it?" said the elder, holding up the arrow. "Yes," answered the other, and came forward to get it.

The elder now observed that the boy's hair was cut very close, and said, "Why is your hair cut so short?" The lad replied, "My parents had another son older

than I am, who was carried away by a *slalakum* and drowned"; and he related the incident of his brother's disappearance, and said he wore his hair short, because his parents had not ceased to mourn over his brother's death. By this, the elder knew that the little boy was his brother, and he said to him, "I am your elder brother. I was not drowned as my sisters supposed. Go home and tell your mother and father that I am here. Say to them that they must clean up the house, and lay down a line of blankets from this spot to the house; I don't like to walk in the mud about the houses." The little boy ran home and repeated his elder brother's message. But his mother thought he was playing a trick upon her, and took a stick and whipped him.

The little fellow then ran back to his elder brother, and told him that his parents would not believe what he said. The elder brother then untied one of his packs, and took out therefrom a large piece of prime kidney-fat, and gave it to the younger, telling him to return to the house and give his mother the fat, as a sign of the truth of his statement. The little fellow ran home with the fat and gave it to his mother, saying at the same time, "He has lots more in his pack."

The old people now believe the story, and set about cleaning the house,¹ and laying down the carpet of blankets.

When all is ready, they go forth and bring their lost son and his wife and child in. The young man had left his pack where he had rested, and as soon as he got home, asked his father to send four men for it. But meantime, the pack had greatly increased in size and weight, and when the four men tried to bring it, they found it much beyond their strength, and had to get more help. The pack still increased in size and weight, and it was found necessary to employ all the men in the village to bring it in. They sling it on two long poles, and so carry it in that way. When they got to the house, there was more trouble to get it in, but at last the task was accomplished.

The young man then bids his father gather a large supply of firewood, and give a great feast, and invite everybody in the village. No one was to be left out. When all were come, the house was full to overflowing. Then the old man untied the pack, and shook out enormous quantities of fat and meat, and roots of all kinds, and many blankets. He gave a blanket to each person present, and on it was placed as much meat and fat and roots as each could carry away. When all had received his portion, they wrap it up in the blanket, and take it home to their houses.

But Raven, who was a greedy voracious person, could not wait to get home with his, but sat down by the way and devoured it, lest his family might get some portion of it.

¹ Among the Indians of this region it was customary to honour distinguished guests or visitors by cleaning up the house and putting down blankets for them to walk on.

THE MYTH OF THE WOLVES AND THE CORPSE.

Once a man and his wife lived together by themselves. The wife became ill, and shortly after died. The husband is very sorry, and grieves much over her death. He puts the corpse of his wife away in the branch of a tree. The night following he went to the place, and lay down alongside of the corpse. Now, during the night, four wolves came along, and discovered the bodies in the tree. Three of the wolves were males, the other was a female. Each of the male wolves tried in turn to jump up and seize the corpses, as they thought both were, but all three failed to reach them. Then the female wolf tried, and she succeeded in getting into the tree at the first spring. She felt both of the bodies, and found one was bound up like a corpse, and the other was not. The bound one she threw down to the others, saying that that was their share, and she would have the other for herself, and they were not to touch it. When she got down she said to them, "You pack that one and I'll pack this." So they took the two bodies home to their "skūmel." Now the man had held his breath, and pretended to be dead in the tree, but, as he was being carried by the wolf-woman he had to open his lungs occasionally and breathe. The wolf-woman perceived this and knew thereby that he was not dead. When they got home the three wolf-men ate the corpse of the wife, but the wolf-woman put the husband upon a shelf. When night fell, and they had gone to bed, she took him down and put him in her own bed, and lay with him. Next morning when the wolf-men arose they saw their sister was lying with a man. They say nothing, but go out hunting deer, but fail to find any, because the man, who was a great hunter, had got up and gone out hunting too, and had driven all the deer of the neighbourhood into a secluded gulch and hidden them there. The wolf-men come home day after day without any game. One day when they were almost starved the man went out and killed all the deer, and made the meat into four packages. By his mystery power, he made these so small that he could easily carry them all at once. He took them home. Now in the wolf village there were four "skūmel." So he bids his wolf-wife take a pack to each of the four houses and throw the meat down to the inmates. She does so, and when the packs are untied the meat nearly fills the houses. The whole village then feasts on the deer meat. After this the man went away towards the shore, which was a long way off. When he got there he calls upon a whale to come up upon the beach. The whale comes up and opens his mouth wide, and the man enters it and cuts off a large quantity of the blubber. This he makes into a small pack by his mystery power and leaves on the beach. He then goes home and bids his wife go and fetch it, telling her that he had found the whale on the beach, and taken some of its fat. He instructs her to share the fat among the people, and say to them that if they liked that kind of food they might accompany him to the shore and get some more for themselves. They like the whale blubber so much that they one and all accompany him. Not a single person is left behind. When they get to the shore the man cuts a hole in the side of the whale, and tells the

wolf-people to go in and help themselves. When everybody has passed in he gives the whale a kick and off it goes spouting and groaning into deep water. Thus the man revenged himself upon the wolf-people for eating his wife's corpse, and thus it is the whale spouts and groans to this day. It is caused by the wolves inside it.

MYTH OF THE YOUTH WHO CHANGED HIS FACE.

Related by "Mary Anne."

In a large village there once lived a man who had a very handsome daughter. One night one of her many admirers went to her couch and sought to lie with her. As he approached she called out, "Is that you?" "Yes," answered he. Seeking to put him off she asked, "Have you washed yourself?" "No, I haven't," replied he. "Go, first," said she, "and wash yourself and then you may come and lie with me." The youth went away and bathed in the river and then returned. When he was about to lie down she asked again, "Have you washed yourself?" "Yes," replied he, "I have just come from the river." "Did you scrub your genitals with gravel?" "No, I didn't," he answered. "Go, then, first and do so, and then you may come back to me." Again the youth did as the girl bade him; but when he returned the second time she refused without further excuse to let him share her blanket. Angry at her conduct towards him, he left her and went to his own home. Next morning he started off alone, and went a long way into the forest. In order that he might readily retrace his steps he dropped some small objects from time to time to mark his trail. After he had walked a long way he came to two old blind men who were engaged in making a canoe. They had only one adze between them, which they passed from one to the other in working. When the youth perceived that they were blind, he put out his hand and intercepted the adze as the one passed it to the other. This action of the youth's caused the old men to quarrel; but presently discovering that a third person must be present who was fooling them, they call out and ask, "Are you, who took our tool, our grandson? if you are, don't fool us in that way." The youth then acknowledged his presence, and addresses them as his grandparents. Straightway there comes upon him a sudden accession of "mystery power" and he restores their sight. These two old men were the willow grouse. They now say to him, "Go through yonder wood and you will come to an open prairie. In the distance you will see smoke. Take that direction, and you will come to the house of our wives." The young man took the path pointed out to him by the old men, and when he emerges from the wood perceives in the distance the smoke of a camp fire. He goes towards it, and finds the house as the old men had said. He enters and sees two old women, who also are both blind, cooking some food. The one passes it to the other. When they do so, the youth puts forth his hand and intercepts it. This causes an altercation to take place between the old women; but presently finding out that the food is being taken by somebody else, they cry out, "Is that you, grandson? If it is, don't fool us in this way." He admits his presence and restores their sight as he had that of

their husbands. In return for his goodness they instruct him as to his journey. Say they, "Go through yonder wood, and beyond you will come upon a second prairie. There you will find your grandmother, Sand-hill Crane. She will further advise you as to your journey." He follows their instructions and comes to the house of the old Sand-hill Crane. She bids him welcome, and tells him to sit down. She then gives him some roots to eat. After he had eaten she tells him how to proceed on his journey. He goes forward again, and comes at length to the home of the man he is seeking. This is the maker of faces. Now before he left the old Sand-hill Crane, she instructed him on this wise: "When you come to the face-maker's house, and he bids you look through his boxes for the face you desire, be careful not to choose any of these; look through the boxes but don't make your choice till you come to the last face of all, which leans against the wall by the door. Choose that, it is the handsomest of them all. You will know it by its beautiful long black hair." The youth thanked her for her advice, and promised to profit by it. When the face-maker saw the youth approaching he said to himself, "I suppose this young man wants to change his face; I wonder what kind of a choice he will make?" The youth entered and asked for a change of face. "Look through the boxes," said the face-maker, "and see which you would like." He does so, examining this and that but choosing none. At last he has seen them all, and comes to the head with the long black hair, which leans against the wall. He takes this and says to the man, "I like this best; I'll have this one." Said the face-maker, "You have made a good choice; that is my best face. Now come and sit here, and I will soon effect the change of heads for you." The youth sat down where he was told, and the face-maker then took some of his "medicine" and sprinkled it over the youth. Then he cut off his head, and put in its place the one the youth had selected. The operation being over the young man thanked the face-maker, and set out to retrace his steps. As he was leaving the house his eyes fell upon the head he had just discarded, and he noted for the first time how ugly he must previously have been. "No wonder," thought he, "my sweetheart was cold, who would care for a man with such a squint-eyed, crooked-nosed, twisted-mouthed face as that," and he laughed to think of the capital exchange he had made. In course of time he got back home again. When there he willed in his heart that the younger sister of the girl who had rejected him should come and play there and see what a handsome man he now was. In a little while she appeared and saw him. When she returned home she told her elder sister what a fine-looking man there was in the house. That night the elder sister stole over to the young man's house and intimated that she would like to stay with him. Said he, "Have you washed yourself?" "No," said she. "Go first and bathe yourself and then come back." The girl went and bathed in the stream, and then returned. Upon her return he asked, "Did you scrub your genitals with gravel?" "No," replied she. "Then go back and do so before you lie down," said he. The girl went again to the river, and scrubbed her genitals till the blood came and then returned to him. This time the youth said plainly to her, "Go away, I don't want

you," and she left him and went home. Thus he punished her for her former rejection of himself.

Now the girl was angry at his treatment of her, and was determined to be revenged. The next day, therefore, when she went out to fetch some water, she willed that her stool be transformed into a bird, with bright and attractive feathers. The metamorphosis immediately takes place, and she places the bird in the lake. She then further wills that the young man's younger brother should come out and see it. This the lad did, and ran back to bid his elder brother come and shoot it. The elder comes out with his bow and arrows and shot at the bird, but failed to kill it; and the bird swam farther out into the water. The youth now got into his canoe with his brother, and paddled after the bird. He attempts to shoot it several times, but fails on each occasion. At last, when they are far out upon the water, and out of sight of land, he strikes the bird, and immediately it became excrement. He knows then that a trick has been played upon him. He now paddles for the nearest shore. When he gets there, he pulls his canoe out of the water, turns it upside down, and conceals his younger brother beneath it. Then he lances his breast till the blood flows, and throws himself on his back on the upturned canoe. Presently a saw-bill duck came along. He now wills the duck to come and take him off. The duck does so, but goes only a little way, and then returns with him again. The young man now takes the duck and shakes it till its bones drop out of its skin. Then he lies down as before. In a little while a diver came along. He treats the diver in the same manner as he had the duck, and secures its skin also, and again lies down. Soon after, an eagle came down, and its skin was secured in like manner. Then he took his brother, and clothed him in the duck's skin, and into the diver's skin put his canoe and paddle, while he himself donned that of the eagle. Said he now to his younger brother, "Don't you start until I am well out of sight." With that he soared aloft, and presently disappeared behind the clouds. The younger brother then flew away homeward, in company with the canoe and paddle, and alighted at the Sts'eélis slough. Meanwhile, the elder brother found himself in cloud-land, and unable to return. After wandering about awhile, he came upon a house in which dwelt an old couple, who addressed him as grandson. He stays with them and goes out daily to hunt mountain goats. He kills many, and the old grandparents dry the meat and fat of them. But the youth grieves and longs to get back to the earth again. He gives up hunting, and lies on his back all day long and mopes. When the old people see this, they say to him, "Cheer up, grandson, you'll get back by-and-bye, and see your parents again. To-morrow go out and get us a large bundle of métsétl."¹ This he did, and the old woman dried and combed, and spun it into a

¹ This is the *spatsin* grass of the Thompson Indians, known to botanists as the *Asclepias* or Great Milkweed. It yields a strong fibre, and was universally employed by the natives of this region to make their fishing lines and nets. It was an important article of commerce with the Thompson Indians, in whose territory the grass was fairly plentiful and of good quality.

rope. For several successive days, he brought in bundles of métsétl. All day the old woman was busy making a large basket, and all night she spun ropes. Soon both the basket and the rope were finished and ready for use. They then made up all the dried meat and fat into one big pack, and by their "mystery power" so diminished the size of it that it appeared but a tiny parcel. They then put it into the basket, and bade the youth get in also and lie down and cover his face up, saying that they would let him down in it to the earth-world. He got in and lay down, and they covered him up. Then they opened a hole in the floor of their dwelling, and through this let down the basket by means of the long rope, which the old woman had made from the métsétl. Before they let him down, they told him that should the basket be stopped in its descent, he was not to uncover his face and look out, only roll it from side to side, and then it would go on descending. The stoppage, they said, would be caused first by the clouds, and after that by the tops of the trees as he neared the earth. He promised to do as they told him. But when the basket had gone down some way, and was stopped by the clouds, he forgot his promise, and looked out to see what was the matter, and the basket straightway returned to the top again. The old people reproved him for looking out, and lowered the basket again. This time he went down a little further, but when the basket stopped he again put out his head to see what the impediment was, and immediately the basket was carried back to the top. Three times this happened, and then the old people became very angry, and warned him that if he came back again, they would not help him any more. The fourth time he was careful to observe their instructions, and presently, after a few temporary stoppages, found himself back in the earth-world. He takes up his pack and gets out of the basket, which is straightway drawn up into the clouds again. Then he went home, and the next day he gave a great feast, and invited everybody in the village to come and share his meat and fat with him.

MYTH OF THE THIEF.

Related by "Mary Anne."

There was once a populous village. All the people lived in one long communal dwelling except an old couple and their grandson. Now some of the inmates of the long-house began to lose their property. Every night a thief entered the building and robbed one of the divisions, and got away with the plunder without being seen. "Who can it be that is thus nightly robbing us?" question the people one of another. At last suspicion falls upon the grandson of the old couple who lived apart by themselves, and they determined to set a watch that very night and try and take him in the act. Now it so fell out that the suspected youth, who was entirely innocent of the thefts, and moreover knew nothing of them, had occasion to go to the long-house that night to see some one, and when the watchers saw him coming they said to each other, "Here comes our thief, let us tie him up and throw him into the river." When he came near they caught

and bound him, and took him down to the river at some little distance from his grandparents' dwelling, and threw him into the water and drowned him. But he does not sink; he is floated down the river with the current, and the wind presently rises and floats him ashore on the opposite side of the river near by a settlement. Meantime his grandparents were wondering at his absence, and when the next day passed without any sight of him they became very anxious. No one at the long-house had seen him, they said, for those who had bound and thrown him into the river kept the matter to themselves, the more so when they found on the following morning that the thief had been at work again during the night and taken away more property. As day by day went by and his grandparents received no news of him, they were fain to believe he had been killed, or called off by a slalakum, and they grieved sorely over his loss.

Now when the young people of the settlement, near to which the winds had carried the floating body of the youth, went down to the river in the morning to fetch water, they saw a strange object floating on its surface, and ran back to tell their elders. These say, "I suspect that is the body of your cousin who has been missing; you had better go down and bring it up." So the young people return to the river and bring up the floating corpse to the house. The women spread some mats on the floor and lay the body upon them. Then they untie the bindings about it and sprinkle "medicine" over it, and in a little while the youth comes to life again.

Now the name of the people of this settlement was S'etlkai (meaning unknown). The S'etlkai said to their young people, "You ought to take him home, his grandparents must be sorrowing for him." Before the youth leaves them the S'etlkai give him some of their "medicine" and a magic rope, and tell him to be careful to sprinkle some of the "medicine" on his grandparents and in their house, or else they would become twisted and knotted up like the trees that grew about the settlement of the S'etlkai. The young S'etlkai now take him home. It is night when he arrives. He sprinkles some of the S'etlkai "medicine" upon the house and upon his sleeping grandparents, and then lies down in his bed and goes to sleep. In the morning when the grandmother opens her eyes she sees her grandson asleep on his bed, and wakens her husband, saying, "I think our grandson has come back." Now, during the absence of their grandson they had not ceased to bewail and lament his loss, and the sound of their cries and lamentations had been easily heard by the people in the long-house. When these sounds ceased, as they did, after the return of the grandson, the inmates of the long-house began to wonder and ask one another why the old people had so suddenly stopped their mourning, and they bid two of their young men to go down to learn the cause of it. "Why send two of us," said Skaiaq, the mink, "surely one is enough. I'll go down myself." So he went down to the old people's dwelling. Now the grandson had instructed his grandfather to build a platform outside the house. This the old man had done. As Skaiaq approached the youth went out to meet him, and spoke thus to him, "I believe you are one of those who tried to drown me the

other night," and with that he took him and threw him on the platform, and he became all twisted and contorted by the Sēétkai power which the youth now possessed. When Skaíaq did not return, the elders sent two other young men down to see why he stayed, and to learn why the old couple had stopped their mourning. The youth was awaiting them, and as they approached he made passes before them with his hands, saying as he did so, "I believe you are some of those that ill-treated me the other night and threw me into the water to drown." Before he had finished speaking the two were all twisted and bent, and he threw their bodies on the platform on top of that of Skaíaq. These messengers not returning, the elders sent down other of their young men. These were treated in like manner. When all the young men had been sent down, and none had returned, the children were next sent. These the youth received as the others, and piled their twisted bodies one upon another on the platform. After the children the elders sent down the young women, and when they did not return, the middle-aged men and women. And now, there being no one else to send, they determined to go themselves and see the cause of these strange proceedings, and why no one had returned. But they, too, were treated in like manner as the others, and now not one of the inmates of the long-house remained alive, they all lay twisted and contorted in a great heap upon the platform which the youth had bidden his grandfather erect for the purpose.

Now all this time the thieving had been going on, and every night something had been stolen, until almost everybody's property had been taken. After a few days had passed, the grandparents ask their grandson what he was going to do with the people, and whether he would not restore them to life again. Said he to them, "They caused you unnecessary grief and sorrow, let them remain awhile; later I'll see what I can do for them." After the lapse of several days the youth took his Sēétkai medicine and sprinkled the bodies one by one with it, and everybody was restored to life again, Skaíaq last of all. Now, as he lay undermost, the weight of the others had pressed him somewhat out of shape. When he came back to life he cried out, "Dear me! I must have been sleeping." The youth now tells the people of the long-house that he will help them catch the thief that has been robbing them with impunity for so long.

The night following they kept watch till near to dawn, then all of them except the youth fell asleep. Just before daybreak, he heard the thief approach. He stopped at the door, and thrust in his arm, which was exceedingly long, and felt about in the house with it, and when he had seized what he wanted, he withdrew it and went off with his plunder into the forest. The next night they arranged to watch a second time, but all except the youth fell asleep again towards morning. Just at dawn the thief came as before. Then the youth awoke the others, and they saw how the thefts were accomplished. When the thief left with his booty the youth said to the others, "Come, let us go after him, but don't shoot him; let us track him to his camp, and then we shall know where he hides his plunder."

Now the youth had power to make people's feet sore at will. So when the Slálakum thief was hurrying away from them, he caused his feet to become sore, so that he had to go slowly, and they could keep up with him. After a little while the Slálakum arrived at his camp. The youth then threw his magic rope at him, and this wound itself about him and fastened him securely and he fell down. The youth then throws some of his "medicine" upon him, and he is immediately twisted and contorted and dies. The young men then enter the Slálakum's dwelling. They hear the old Slálakum within saying to himself, "I wonder what is keeping my son so long, he ought to be home before this. When I used to go out I was never so long away as he is." The youth threw his magic rope at him, and treated him as he had his son.

They find the dwelling stacked with their lost property and blankets innumerable. Each takes what belongs to himself, and then the youth sets fire to the house, and both it and the Slálakum's bodies are burnt up. As the bodies burn they throw out sparks, and these become the little Slálakums that now inhabit the forest.

Thus was the thief discovered and punished.

MYTH OF THE QEQALS, OR THE BLACK-BEAR CHILDREN.

'Ntópōs (Magpie) had two wives Grizzly and Black-bear and eight sons, four by each wife.

One day he went out hunting. Later in the day his Grizzly wife went to meet him as he returned. She met him on his way home. "Let us sit down and rest," said she, "you must be tired." He consented and they sat down together. As they rested she said to him, "Let me louse you." He allowed her to louse him and as she did so she took her opportunity and bit him in the back of the head and killed him.

(The incidents of the story from this point on are so similar to those I recorded in the story of *Sqak'tktquactt*,¹ the Qals of the Thompson Indians, that I shall skip them and take up the story again where the Qals returns from the Thompson region to the Harrison, this being more particularly StsÉélis territory and therefore more particularly a StsÉélis story.)

When the QEQals got back to the Harrison River they were accompanied by Skaiaq, the Mink. Here they saw some people peeping through the cracks in a rock at them. This made the QEQals angry and they transformed them straightway into stone. One of these stones is known now as the "swan" stone, another as the "hat" stone and another as the "whale" stone, because of their resemblance to these things. As they proceeded on their way they came to a place where a large number of people dwelt. It was a Slálakum settlement. Skaiaq warned the QEQals not to go into the Slálakums' house, but they went in notwithstanding; and in the magical contests which took place between them Skaiaq had one of his hands bitten off by a Slálakum. He was ashamed of the fact and hid it

¹ *Folk-lore*, vol. x, No. 2, June, 1899, London,

from the QEQals, and when they started next morning he sat in the bow of the canoe and did no paddling. The QEQals presently ask him why he does not paddle. Skaíaq then makes pretence to paddle. "Why do you paddle with only one hand?" asked they. "Where is your other hand?" Now Skaíaq is sitting with his back to the others and so he puts his sound hand first over one shoulder and then over the other and says, "Here are my two hands." But the QEQals are not deceived and say, "You need not try to deceive us, we know you have lost your hand and we will restore it for you." With that they heal his hand and it became as sound as before. Shortly after they come upon Tsólsíe spearing seal. Him they turn into rock as he crouched in the act of throwing his spear. This rock may be seen to-day. From this point they went to the place where the hot springs are now found, and here they saw some people cooking salmon heads. They transform these people into stones and the hot water they were using became the Hot Springs of Harrison. From here they pass over to an island in the lake, where they find two men going through their dancings and training for *súlia*. They displease the QEQals and are turned into stone. The water now became rough and big waves arose. This annoyed the QEQals, and they transformed the waves into stone and they may be seen there to this day. They next meet with an old Sqolám or "doctor," and he challenges them to a contest who could urinate the farthest and highest. They all try but the old man beats them, and makes his water rise over the mountain top. They leave him and go on and come to a person grinding a bone on a rock. "Why do you do that?" asked the QEQals. Replied he, "I am preparing this to use on the QEQals who I hear are coming this way." The QEQals laugh and take the bone from the man, and put it in his head for ears. Then they strike his legs with the old grizzly bear's skin, which they carried with them, and make marks on them, and then he becomes a deer. Some time later they meet an old man. This person put on his bearskin coat and leggings and hat, swallowed large quantities of down, and then took the QEQals up the lake, whistling as he went. He did this to bring the north wind, and from that day no Indian ever whistles when he is going up the lake. The north wind began to blow hard, and blew the down out of the old man's mouth, and this became snow. A heavy fall of snow soon lay on the ground, and one of the QEQal got so tired with travelling that he was fain to stop and rest. "You had better make him strong again," said the others to the old man. He does so and they all proceed again. Presently they come to a place called S'átā, which means "stretching out." This referred to the trail which stretched out so far that it had no end.

At last they get to the old Sqolám's house.

When they arrived, the QEQals took the old man's nose and threw it down the river, and the place where it alighted has ever since been called "múksEl" (nose). They then took his arms and threw them away in like manner, and then cut out his heart and threw it away, and it was turned to stone. This stone or rock is called "smant-tsála," or "the heart-rock." To this rock they said: "If

people hereafter make fun of you and deride you, cause the wind to rise on the lake. If they treat you with respect and regard, then make the waters calm for them." From here they went to Fort Douglas, and found an old man and his wife. The man was out fishing when they arrived. He used the frame-work of a K'mástel (*dip-net*) without the net, and all he caught was the slime off the salmon's body. This he wiped off into a basket. The old woman was busy heating the cooking stones when the QEQals arrived. When the old man brought in his slime, the old woman took it and put it into a cooking basket with some clean water. To this she added some berries and some roots, and thus made a stew. The QEQals watched the operation, and when the stew was ready, shared it with the old couple. The youngest of the QEQals now said to his eldest brother, "You must do something for these kind-hearted old people." Thereupon the eldest brother pulled out some of the hairs from his leg, and threw them on the ground outside, and they became mētsetl (a fibrous grass from which the old Indians made their fishing lines and nets). He then took some of the mētsetl and combed and prepared it and showed the old couple how to roll or spin its fibres into yarn on their thighs, and further, taught them how to make nets from it, bidding them say as they finished each round, "Tcōla! Tcōla! ō pākshyil!" ("stretch! stretch! O leg-hair!") When the dip-net was finished, he bade the old man go out and fish with it. Said he to him: "When you get to the river, dip the net in once, and you will take a salmon; then take off your cape and place the salmon upon it; don't touch it with your hands. Dip your net in a second time and treat the other salmon in the same manner. Don't dip your net in again, but bring home the two salmon in your cape on your arm." The old man went down to the river and did as Qals had instructed him, and presently returned with the two salmon. In the meantime, the wife had been told to prepare her boiling-baskets, and she had them ready by the time the old man returned with the fish, which he carried reverently in his arms. The Qals now took the salmon and cut them open and cleaned them with a stone knife, and placed them in the basket-kettle of clean water. He then put in hot stones from time to time, until the salmon were sufficiently cooked. Before he took them out he tried if they were done by sticking a pointed stick into them. Finding them ready, he dishes them up and they all partake of some. The Qals next instructs the old couple how to dry and cure salmon for winter use. Said he to them, "For the first four days of the salmon run, cook and eat your salmon fresh; after the fourth day, split them open and dry them as I have taught you."

They go on from here and meet another old couple, and help and instruct them in like manner.

From this time onward, the people show respect to the QEQals, and they transform no more of them into stone. The QEQals never punished good people, only those who were wicked, or who offended them.

THE SKAÚLITS.

The Skaúlots are a sadly diminished tribe. They inhabit a scattered village composed of about a dozen frame-buildings on the left bank of the Harrison, at the point where it joins the Fraser. Near the same spot in former days dwelt their ancestors in their long-houses and skúmél. The tribe a few generations ago must have numbered two or three hundred souls; to-day they do not number as many score. One does not wonder that the old men grow sad over the disappearance of their race, and sigh for a return of the old days. Although they are now better housed and wear "store" clothes, and have many of the luxuries of modern life, in the form of tea, sugar and coffee, and other "groceries," and "live like white men," it is doubtful whether they were not better off in the old days of savage roughness and savage plenty, with their bodies sound and strong and free from disease. Contact with the whites has been everywhere a deadly experience for the native races of this continent—even for those under the beneficent rule of the Dominion Government. The change from the old to the new condition of things was too radical and too abrupt for them, and they have suffered correspondingly. They are now in this region in the transition stage, and how many of them will emerge therefrom and be fitted to fall into line in the new life of the future is difficult to foretell. There can be no doubt, I think, that many of them will pass away for ever, and become as extinct as the elk now is in southern British Columbia, which but a few generations ago roamed over the sites of our modern cities. But, if we may judge by the progress made by such bands as the Síciatl, a remnant will be left to remind us that we were not the first occupiers of the country.

The old-time Skaúlots were divided into three septs, each of which was believed to have had a different and distinct origin. Two of these were tel Swéyil, or sky-born; the third was descended from the Sturgeon of the old days.

"Pat Joe," one of my Skaúlots informants, and, as far as I could learn, the only *old* man now left among them, claims to be a descendant of the "first" Skaúlots man, who was called Sumqéameltq. He came down from the sky, bringing with him in his arms two animal-like beings called Skaíaq and Cwómetsel, that is, Mink and Otter. He also brought down with him a curious kind of magic plaything or toy called celmóqtéis, which had the appearance of a "feathered ring." When this individual came down he held a kind of red parachute over his head; this kept him from falling too quickly. He landed on a rocky point at the mouth of the Harrison river, on the side opposite to that on which the Skaúlots afterwards settled. Here he constructed a landing stage or raft, and tied it to the point by a cedar-branch rope. I saw, what was claimed to be a portion of this very rope, which was in the possession of my informant. It was the best specimen of native rope I have ever seen. The Indians never make these ropes now. This specimen was about three-quarters of an inch in diameter, and was very finely made, not a single end or join in the whole length was visible, and

the strands of cedar were twisted with the evenness and regularity of those of hempen rope. In strength and durability these ropes must far excel the best hempen rope. I tried to secure this specimen, but the old man would not hear of parting with it on any consideration; he was keeping it to be buried with his body along with the sacred relics he had inherited from this first founder of his family.

By means of this raft which this rope secured to the rocky point, Sumq̄eameltq̄, the first man, caught salmon in a k'māst̄el or dip-net. It was from him that his descendant learnt to catch salmon in this way. The day following his descent to earth he took the celm̄óq̄teis, or "feathered ring," and rolled it down to the water, and the otter and the mink ran down after it and brought it back in their mouths to him. In the myth, a brief version of which I have given in the native text below, he is called the "father" of these two creatures. After this he procures from some source not mentioned, te sqoiáq̄e, or "the mystery mask," which he puts on and then performs a dance. When this is over, the mink and otter are transformed into two children, a boy and girl, who are called "kelákt̄el," that is, brother and sister. Later these two marry, and from this union spring keq qól'mōq̄, many people. At the time of their union the pair are very poor and destitute, and have no clothes of any kind. The youth learns to make bows and arrows and goes out to hunt. He kills many animals, and from their skins and furs his wife makes clothes and blankets. The names of this brother and sister were respectively Hums̄éla and Humáts̄ēa.

When the mink and otter were transformed into a boy and girl they cast aside their skin coats; these were religiously preserved and have been handed down from father to son for generations. They are mystic and sacred objects, and are regarded as the embodiment, in visible form, of the "spirits" of that first mink and otter which Sumq̄eameltq̄ brought down from the sky-world with him—that is to say, they were regarded by "Pat Joe" and his ancestors as the emblems of the family tutelary spirits or totems. Those who were under their protection were very successful in trapping mink and otter. This old man's house contained numbers of skins of these animals in various stages of curing. He is famous as a hunter of them. I did not see the original mystery skins when he showed me the rope. He had taken them a short time before to his brother's, who has a house in the next village some miles distant; but Casimir told me he possessed them, and that he had seen them often. It appears to me that we have here a good example of the hereditary totems found among these Halk̄óm̄élem tribes, and the Sturgeon totem, or tutelary guardian of the Sturgeon sept in this same tribe, furnishes us with another. Some time after the descent of Sumq̄eameltq̄ another pair appeared on the spot where the present village stands. This pair came up from the river where they had lived as Sturgeon. They were, however, not like the sturgeon of to-day; they were "mystery beings" like the ancestors of the mountain septs among the Sts̄élis, and could change their forms from man to fish at will. They lived an existence similar to that ascribed to the salmon in the "Salmon Isles," and were sometimes fish and sometimes people. Casimir, the present chief of the

Skaūlits band, related to me the following myth concerning them. He is a descendant of this sturgeon people, and has both a sqoiaqī and sturgeon 'sákwaiaṃ, (crest) though he has never used them, he says, as he has been brought up a Christian, and leads the daily services in the church in the absence of the priest. He inherited both totems from his ancestors, the sturgeon totem from his first ancestor and the Sqoiaqī from a later one. The sturgeon myth is as follows:— A long time ago three men came into the Harrison river in their canoe; as they rounded the point they saw some children (tē stáaqetl) playing in the water with something that looked like a ball. When the men perceived the children they backed their canoe out of the river and went home and told the people of their village of the strange sight they had seen. A great crowd of them now got into their canoes and came down to the Harrison river to see the children playing in the water with their strange toy. When they got near to the children one of them paddles forward and seizes the plaything. When he has secured it he cries out, "I have your toy, my younger brothers." One of the children now rushes off to tell their parents. The elders come down to the water to see who has taken their children's toy. When they see the strangers the Elderman bids them come ashore, and promises to explain and show them how the toy works. So the visitors come ashore, and all go up to the house. When they get inside the old man took the toy and put it on the ground, and behold it moved and walked of itself. Then said he, "Watch and see how I do it, and then do it in like manner yourselves." He then showed them how the toy was worked, and afterwards presented it to them, saying, "Take it; it is yours." The strangers stayed with the Sturgeon people some days, and were fed royally on sturgeon meat every day. Now every morning the visitors saw that the young people of the house went down to the river to bathe, and that one of their number was always missing when they returned, and that immediately after some one went down to the water and cut up a sturgeon. They wonder where this sturgeon comes from as nobody goes out fishing. When several days had passed and they had observed the same thing happen every day, they began to suspect that there was some connection between the disappearance of the missing boy and the presence of the sturgeon, the more so, as they had always been told when eating the sturgeon to be careful of the bones and set them aside, and some one had afterwards gathered them up and thrown them into the river; and one of them determined to find out what this connection was. So next day when they were eating the sturgeon he secreted a bone from the head of the fish and kept it back when the other bones were collected. Soon after a youth came up from the river with his face disfigured and bleeding. When the Elderman saw him he inquired of his visitors if any of them had kept back a bone of the sturgeon they had been eating. The man who had hidden the bone now brought it forward, and the Elderman took it and cast it into the river. The young man with the disfigured and bleeding face then went into the water, and presently returned with his face whole and nothing the matter with him. Thus the strangers found out they had been eating the flesh of that young man.

The latter incidents of this story recall the myth of the salmon, as told by the Sk'qómic, who did the same kind of thing and were found out in the same way by Qals and his followers when they went to visit the salmon people. Casimir was unable to say what caused the sturgeon people to give up this convenient way of replenishing their larders, or when or how they lost the power to change from people to fish. It was in the old days before he was born that they used to do these things, he said, but the people of his sept could always catch sturgeon whenever they wanted to even now, and this fish was still regarded by the old people with consideration and respect and the bones were always thrown back into the water when he was a boy. The old people used to consider themselves under the care and guardianship of the "spirit" of the sturgeon, and his father had a sturgeon crest or "Sákwaíam." He did not care to talk about the subject much as these topics are discountenanced by the priests, but although he is the leader of the daily services in the church he has still much of the love of the Indian for the "old days" in him yet, and came with me to old "Pat Joe's" and listened to the old man's stories and his remarks about the old times, as interestedly as I did, and joined from time to time in our conversation and helped me to understand any obscure points in the narratives.

The second of the Sk'aúlit septs was of sky-born origin. The ancestors of this family came down as a man and woman from the clouds and likewise had a red parachute when they descended. The names of this pair who are spoken of a brother and sister are respectively "Skwémētluk" and "Skwémētlat." When I pointed out to them that their customs did not permit of brothers and sisters marrying, they explained that though this couple were called brother and sister in the stories they were not regarded as being of the same blood. I could learn but little concerning the after history of this pair.

The term Sk'aúlit, which is applied to the tribe as a whole, seems to mean "coming round" and has reference to rounding the point where the Harrison runs into the Fraser. The names of the three camps that formerly comprised the tribe were given to me as "QítHyil" (meaning unknown but having apparently some reference to "feet"), "Sté'el" (meaning "generous" or "kind"), and "Skwátets" (meaning unknown). Cassimir gave the following name as those of his sturgeon ancestors: "S'tasiláloq" (meaning "water-people"). This is apparently the generic collective term applied to them after they had settled down as men and women. The names of the first human pair are "K'eltémēltq" the man, and "Skulāsétl" the woman.

I desire to point out here that these traditions of the Sk'aúlit have a double value and interest for us. First, they are confirmatory of the account given me by my informants among the Stse'élis and Teil'qéuk concerning these hereditary or family tutelary spirits or totems. I think no doubt can any longer exist that the Salish tribes in former days had not only personal *súlia* or totems, but also hereditary group-totems as well. Whether the "dream" totem or personal *súlia* was ordinarily heritable seems open to question at present, though undoubted

instances of the transmission of some of these occur. As far as we know, these are all cases of powerful shamans' *súlia*, and this suggests to me that shamans as a rule were supposed to possess more powerful *súlia* than other men; and further, that the *súlia* was not ordinarily transmitted or inherited, for the reason that its protecting influence and help was not sufficiently prized or esteemed to make it desirable to do so. Each man may have thought he could secure a more "powerful" protector than his father's. At any rate it is clear, from the fact that some powerful *súlia* were inherited, that there was nothing in the nature of these "dream" *súlia* to prevent their transmission and descent from father to son, or from one generation to another. But after all the transmissibility of the personal dream *súlia* is now a minor question in the face of the fact that other personal totems were heritable and undoubtedly passed from parents to children and spread throughout the whole "kin"; and for my part I am wholly unable to see that any essential difference existed between the group-totems of the Salish "kin" and those of the "clan" of the northern stocks who still have matriarchal institutions, beyond the single fact that with the latter the group was limited in theory, at least to blood relations on the mother's side only, and with the former, whose social structure made such a limitation of the totem-group impossible, it extended to all the relatives on both sides of the house, affinitive as well as consanguineal. The difference, then, in the group-totemism of the northern clans and that of the Salish "families" or "kins" appears to me to be one of social regimentation only.

Secondly, these traditions are also of interest in that they furnish us with the first recorded instance, I think, among the north-west tribes, of tribal descent from "animal" ancestry; and in the light they throw upon this subject. I have already shown what are the native views on these descents and how the Indians generally regard them.

Below I give a collection of Sk'aúli's myths in the native text with English equivalents, and in this connection would take occasion to point out that much of the baldness which is characteristic of these stories in the native form is due to the crudeness of the language in which they are couched, which though suitable enough for the expression of the wants and concepts of a savage people, does not allow of much "finish" or elegancies of expression from our point of view. It is quite safe to affirm that at least one-third of the meaning of their words and sentences is expressed by those auxiliaries of primitive tongues, gesture and tone; and although nothing is more wearisome than consecutive reading of collections of Indian texts, there is nothing wearisome in listening to the recital of these by the Indian himself. Most Indians possess natural dramatic powers, and their ready, graceful and appropriate gestures, and their command of those tones of the voice that appeal to the emotions, make it distinctly pleasurable to listen to their stories of long ago or their recitals of the traditions of their people. So that if the English equivalents of my native texts in this or in former reports seem fuller than the baldness of their expressions justifies, it must be understood that this is because the bare text alone does not render the full meaning and context

of the living recital or do justice to the subject treated of. I have seen women shed tears, and men's faces grow pale and tense over the recital, by some of the elders of the tribe, of the traditions of their people, the text of which would make one marvel that such bald dry statements could call forth so much emotion.

Sôqwiâms te Mistéuq Skwâwits.
Myth of the Sturgeon People.

Related by Chief Casimir of Sk'aulits.

Tl'qâla siwéeka yeéhîl, tlâ-so kwâte-lôqwes te stâaqétl é-wâlem te
Three men were-paddling, then they saw them the children playing with
steâ milkwâlos lē te kâ. Tlâ-tli-sô kwâte-lôqwes te stâaqétl sô lam
like as a ball in the water. When they perceived then the children then they went
yâçit luk-âlçit, le ye-çétstes te siyâyis, tlâ-tli-sô amé tō-keq yū-tlâlem,
back out, they tell the friends-their, then they went lots of them,
é-kwa metâtçil yū-tlâlem ke-ôtl-ê, tlâ-tli-sô lam éhîl kôôtes te ckwileâls.
when arrived they were-there, then went paddled to get the toy.
“Létçil-kwél-lôq te swâlemelep le-skelák.” Tlâ-tli-sô lam kwélkwel
“I have-it the play-thing-your my-younger-brothers.” Then went to tell
te lâlçtsa yûtsôstes te cwâlis, tlâ-tli-sô mē tauq kwâtçetes
one of them he informed the parents-his, they they came down to the water's edge to see
te-lâ kwél-lôq te swâlems te māmelas. Sô kwel te siyâlakwa:
that one (who) had-it the plaything-of the children-their. Then said the old-man:
“Mē-tçap kwa-lâ-tçâm, le-tçil-êwes-tôla.” Tlâ-tli-sô lâ-tçâm yūtlâlem,
“Come-you up-to-the-house, I teach-you (how it is done).” Then go-up they,
sô lâ-qaskw'tauq sô mē kôôtes, sô lâ klâketes, sô lâ
when inside of the house then came he and took it, then he put-it-on-the-ground, then it
émih te ckwileâls, sô kwel te tçûa: “Kwâtçet-tçapkwa! kôôt-tçapkwa!
walked the toy, then said the owner: “Examine-it take-it-up!
steâs-tūq-tçap kwilâ, we-çç-tçap-tçâ, lâ qâ swâelep.” We-mok^u lâtçtl k's tlas
do-it-like-you this, when-do-you-shall, it is yours.” Every morn they
hâhâk-ôm tau-tlâlem stâaqétl etl-mēs qehé ke auita kwa lâlçtsa.
went swimming those children when they came back and not was one.
Tū-hés sô lam te-lâ kwétset te skwâwits, sô tatéeltes we-te-létças
Shortly-after then went that one to-cut-up a sturgeon, then they wondered whence-came
te skwâwits sô k's auitas lam âlakut te skwâwits. Wéyil ke âlôtl lam
the sturgeon since no-one went to get a sturgeon. Next morning again they
hâhâk-ôm, mē kwaé te stâaqétl ke auita kwa lâlçtsa. Tō-hîç sô lam
went swimming, came back the children and not was one. Presently then went
te-lâ kwétset te skwâwits, sô tatéeltes yū-tlâlem we-te-létças te
that one to entrap the sturgeon, then they wondered they (the strangers) whence-came the
skwâwits. Sô kelât étlçtel, sô kwâlîhes k's sâm tluk lē te skafyus te
sturgeon. Now again they eat, then he hid a bone from in the head-of the

skwáwits. To-híc ke mē kwaé te slétlaketl yetcálaqom te sáçus. Sō
 sturgeon. Shortly-after and came back the child bleeding-at the mouth. Then
 lam te siyálakwa p'tám: "Wewéetas le-kwálih k's sām?" Sō mē
 went the old man and enquired: "Has anyone hidden a bone?" Then he came
 aúquestem k's sām. Sō lam tauq, sō lam mēlçet
 and gave him the bone. Then he went down to the water's edge, then he went into the water
 te slétlaketl. Tlā-tli-sō lam wélikes te sām. Sō mā-kwēm te slétlaketl
 the child. Then he went and threw-in the bone. Then came-out the child
 ke wetl auita steás. Sō lam tcām. Sō qolé,
 and there was nothing the matter with him. Then they went to the house. Then there,
 tlā-si-sō metélem k's tlas lētl-hélpinēm.
 then they found-out that they had been eating him.

A full translation of this myth has already been given above.

Sōqwiáms te Sumqéameltq Yūwél Swéeka.

Story-of Sumqéameltq the First Man.

Related by "Pat Joe" of Sk'aúlit, his descendant.

Yūwél swéeka mē kwelátes te yēsála smēiç, te sk'aiaq kes te cōmētsel,
 First man came bringing two animals, the mink and the otter,
 kes te celmóqtēis. K's-wetl-wéyil-k's-wetl le wámetes. Tlā-sō lam
 also the "feathered-ring." On-the-following-day he transformed-them. Then they went
 ā-wálem lē-kwī tcētcū, tlā-sō mēhēltes te lē tcētcū qolám te kā. Tlā-sō
 to play down-on beach, then he rolled it down to beach towards the water. Then
 metsúmates, le kwéekel, le amístōqwes te māls.
 they-caught-it-in-their-mouths, they went up, they brought-it-to the father-their.

(Maqué qa mē kwilá temóq.)

(This happened at that place (pointing).)

Mē kwilátes te sqoiaqī, tlā-sō kwaiélih, lōtl-hai. Sis-wetl
 He came he brought the mask, then he danced, presently-he-finished. After he
 qas hai yatlmis k'wēm te lē kwī tcētcū yāfsela keláaktel.
 had finished then came out of the water on to the beach two persons brother-and-sister.
 Tlā sō melié¹ yūtlálem (tlā-sō mē qāhútset keq qól'mōq). Tlā-sō mē
 Then marry they (then they come to be many people). Then came
 kwól-toqwes te slétleketl. Auita seétsum, auita sekéus, auita tl'pēwel, auita
 to-get-it a child. No clothes, no trousers, no shirt, no
 skélehyil. Tlā-sō metséselem te slétleketl mē-qa swéwolus. Tlā-sō çétes te
 moccasins. Then grew-up the child he became a young man. Then he made a
 tóqwet. Tlā-sō aúkwilāq, mē kaí-lōq-wes te smēiç. Tlā-sō çétes
 bow. Then he went hunting, he came and killed-them the animals. Then he made
 seétsums kes te lóqtels.
 clothes-his and blankets-his.

¹ This word is a corruption of our word "marry." The correct native phrase for this is lākwa kwilátel, which signifies "to come together."

The names of this couple were respectively Humséla and Humátséa. I could not learn their significance.

The English equivalent of this myth has already been given above.

TE Skaiaq KE TE Qals.

Mink and Qals.

Related by "Pat Joe," of Skaúlit's.

Mē QEÉ k's Tcūwásel TE Qals, kōtl lē tī tcōtcō TE S'kwām, KE
Came there once to "Point Roberts" the Qals, away off the shore the S'kwām, and
élwom TE slétleketl. Tlā-sō mē-kwut-qélem TE Qals. Tlā-sō qā skwā
at home the child. Then came in Qals. Then he was hidden
kwultq kōtl ye-mé tlātlél TE S'kwām ye-tlā-tlél le-stwus TE p'ōé.
in the house then he came ashore the S'kwām landing along with him some flounders.
Tlā-sō tlāl, tlā-sō le tauq TE slétleketl. YE-kwilem TE k'wól-tels
Then he lands, then he down to beach the child. He-took-with-him the roasting-spit
ye-kwaiyilíh. Tlā-sō le qolé. Tlā-sō le hutás-toqwes kwilá TE p'ōé.
dancing-as-he-went. Then he got-there. Then he did-to-them this the flounders
Tlā-sō mē-tcām, tlā-sō skáliqes sk'wólem TE héyuk. Tlā-sō
{ (ran the roasting- } Then he-came-up, then-he stood-it-up to-roast at the fire. Then
spit through them).
k'wóls TE sk'wólams, tlā-sō étléts. LE hai, tlā-sō lam TE siyálakwa TE
cooks the roast-his, then he eats. He finished, then he went the old-man
tcōtcō. Tlā-sō mē qéwul TE Qals, sō petamitam-ET
away-off-from-shore. Then came out from his hiding place Qals, then he asked him
TE slétleketl: "Tlúk-teūq WEÉT lám-ōq tauq?" "Tlúk-teil
the child: "What-you do (when) go-you down to the shore?" "I-do
YE-húta kwilá." (Kwaiyilíh.) Mēs tlāl TE sélas. Tlā-sō kōót-tamet
like this." (He dances.) He comes ashore the grandfather-his. Then he took-him
TE slétleketl tlā-sō qésít-tamet, tlā-sō péqom TE sâmps TE slétleketl. Tlā-sō
the child then he shakes him, then drop-out the bones-of the child. Then
étsemps TE Qals TE kwelós TE slétleketl. Tlā-sō lams kwaiyilíh TE Qals LE
he-puts-on the Qals the skin-of the child. Then he goes dancing the Qals he
kwátcatcitl, LE kwilem TE p'ōé. Tlā-sō kwels TE S'kwām: "Säts-teūq
down-to-landing, he took-up the flounders. Then said the S'kwām: "Not-you
le-émets." Tlā-sō mē hutás-tōqwes kwilá,
my-grandson." Then he came he did to them this, { (attempts to run roasting spit through }
the flounders as the boy had done) }
ka auíta mē stáltél. Tlā-sō mēs kwēm TE S'kwām. Tlā-sō
but nothing came-on the stick. Then he came ashore the S'kwām. Then
tlālakes TE p'ōé TE skwólam. Tlā-sō étléts yū-tlālem, tlā-sō áketl TE Qals
he puts on the flounders the spit. Then eat they, then choked Qals
mékutes TE sâm, tlā-sō kai. Tlā-sō kwels TE Qals¹: "éi-k's
he swallowed a bone, then he died. Then he said the (other) Qals: "You'd-better

¹ The Qals are sometimes spoken of as one but four are generally thought of as travelling and working together. Hence the commoner term *QE Qals* which is the collective form of Qals. Throughout this story the singular form is used, but there is more than one of them present.

áyiluq-telep te slétleketl." Tlā-sō kwels te siyálakwa: "éi-k's
bring-to-life-you the child." Then replied the old-man: "You'd-better
áyiluq-telep te slétleketl." Tlā-sō áyiluqs te slétleketl te Qals.
bring-to-life-you the child." Then he-brought-to-life the child (did) Qals.
Tlā-sō kwēéqsuts te siyálakwa áyiluq-temet te Qals. le-hai.
Then did-likewise the old-man and-brought-to-life-him the Qals. *Finis.*

THE MINK AND THE QALS.

Once the Qals in their wanderings came to "Point Roberts."¹ Here S'kwâm and his son lived. S'kwâm was off the shore fishing for flounders when the Qals arrived. They entered the house and hid themselves for the coming of S'kwâm. Presently he comes ashore bringing in with him his catch of flounders. When he lands his grandson takes the roasting-spit and goes down to his grandfather, dancing as he went. When he got there he thrust the spit through the flounders ready for cooking them. Then they both come up to the house and the spit is set before the fire. When the fish are cooked they eat them. Soon after the old man went out fishing again. When he had gone the Qals come out from their hiding-place and question the boy, asking what he does when his grandfather brings in the fish. He replies: "I dance down to the shore like this with the roasting-spit and stick it through the flounders." When he had so said one of the Qals took him and shook him, so that his bones fell out of his skin, which Qals now puts on, so that he may appear to the old man, whom he desires to trick, as his grandson. When S'kwâm returns Qals takes the roasting-spit and dances down to the landing and attempts to thrust the spit through the flounders as the boy was accustomed to do, but he was clumsy over the operation and the old man called out and told him that he was tricking him and was not his grandson. Then the old man came ashore and put the flounders on the spit and they go up to the house and roast them. Then they eat them and one of the Qals is choked by a bone and dies by the magic of S'kwâm. When Qals sees that he has been outwitted by S'kwâm he says to him, "Hadn't you better restore the boy to life?" meaning thereby his brother who had been choked. But the old man replies, "Hadn't you better restore my boy first?" The Qals restored the old man's grandson to life again, after which S'kwâm also brought back to life the Qals who had been choked. Thus S'kwâm got the better of the Qals.

TE Slétlaketl St'sās.

The Boy Poor.

Related by George William, of Skaúlots.

Kai çe mels sólai çe tels skās yaiyēselaá lē te lálēms.

Dead the father-his only the mother-his with-him just-those-two in the house-their.

Sō ōk^u te setltēn. Sō sqaíēm te mósmis, tlā-sō mē kwalóqwes te sétltēns.
Then gone the food. Then sold the cow, then went to procure the food-their.

¹ The scene of this story is on the coast just south of Fraser River.

Aúa-lēs yehéç kelótl òk^u te séltens, tla-tli-sō kelát quaíem té temóq kes te
 Not long and then gone the food-their, and then again sold the farm and the
 lálem. Tla-tli-sō mē qā-ēi tau-tlálēm. Aúa-lēs-yehéç kelótl kai çē
 house. And then became better-off they. Not-long-after and then dead the
 tels, tla-tli-sō lāletsáá. Aúa-lēs-yehéç ke le ók^u te tálas, tlā-tli-sō
 mother-his, and-then he-all-alone. Not-long-after and gone the money, then
 st'sās, auíta siyáiyis, auíta séltēn. Tla-tli-sō lam te táwin cōlís te etltel-
 poor, no friend, no food. And-then went-to the town where the eating-
 aútuq, tlā-sō kwel-stoqes we-aúquest-temet kwā setltēn, sō kwiáltcetēn; sō
 house, then he-asked-him if-he-would-give-him some food, but he-refused-him; then
 lam-te latc-aútūq. So le émilises te kōk, sō cwumál séltēn. Sō
 he-went-to another-house. Then he went-to the cook, then begged-for food. Then
 áqatem, sō çútstem wé-yáçes-k's-amés. Kelát wéyil tlā-tli-sō
 he-gives-it, then he-tells-him that-he-might-at-any-time-come. Again on-the-morrow and-then
 lam te latc-aútūq, tlē-tli-sō cwumál, sō kwiáltcetēn, tlās yiyáiselis
 he-went-to another-house, and-then he-begged, but he-refused-him, that-was the-second-man
 te kwiám. Tlā-tli-sō lam te latcaútūq, sō qalélses te kōk, sō
 that refused. And-then he-went-to another-house, and-when he-got-to the cook then
 cwumál. So aúquestem, sō çútstem wēyáçes k's amés. Sō yēyísela
 he-begged. Then he-gave-to-him, then he-told-him always he-might-come. Then two
 te aúquest ke yēyísela te kwiám. Tlās wēyáç we-he-lam, tlā-sō mē aúquestem.
 gave and two refused. There always he-used-to-go, then come to-give-him.
 Ke ō mē aqā ēyém; sō le yaies. Sō kwalóqes te tála, sō kwélem
 And then come to-be strong; then he worked. Then he-gets money, then he-buys
 te séltēn ke te lapél. Sō le ts'qūósem lē te stālō. Sō lam yeái ke
 food and a shovel. Then he washes-his-face in the river. Then he-starts off and
 lam aqatcaúq. Sō òk^u te setltens, ke skwē k's-mē-kálçet alwe-teauq, sō
 goes a-long-distance. Then gone the food-his, and unable to-get-back too-far, then
 kwilkwálawon k's-ēs-k's-kais, lam tūwa kwótc-loq-wes te cwewális. Sō
 he thinks that-he-might-as-well-die, go then to-see-them the parents-his. Then
 lam te aiyēlep temóq, sō áqēç. Sō étut ē-kwō-qol étut kaaútl
 he went to a nice spot, then he lay down. Then slept whilst he slept he began
 mē kwās, sō qelúk't, sō kwótc-lōq-wes te stáá k's siákwum mē-
 to become warm, then opened-his-eyes, then he-saw-it like-as-it-were a sun come-
 klépel. Sō mē qeélsēm, sō p'támētem: "ēs qeēt?" Sō
 down. Then comes towards him, then he asks: "What are you doing?" Then
 kwélkwel k's st'sās, auíta séltēn. Sō çútstem wa-k'tlhamēs, sō
 he replied that he was poor, no food. Then he tells him he-must-kneel-down, then
 k'tlham. Sō éwes-kutem te tsehéyitl. Sō tél-loq-wes, sō çútstem
 he knelt. Then he taught him a prayer. Then he learnt it, then he-told-him
 wa-lam-es te teauq. Sō k'tlham, sō lámistōks te tsehéyitl. Tla-tli-sō
 he-must-go far-away. Then he knelt down, then he repeated the prayer. And then
 lam lám-aqa elqéçil, sō melkel-lóqwes te tsehéyitl. Sō mē-kálçet,
 he set out but went only half-way, then he-forgot-it the prayer. Then he-went-back,

so wēwiyēs-kutēm tē tsehēyitl kelāt. Kutlā tlā-tli-sō lam, sō
 then he taught him over and over the prayer again. After then he-set-off, then
 qolēs k'tlham, sō tsehēyitl, sō haīetes tsehēyitl, sō qelūk't, sō
 there he kneels, then he prays, then he finished praying then he opened his eyes, then
 kwōtc-lōq-wēs tē ē lālem. Tlā-tli-sō mē-kālçet, sō qolēlsēs tē swēēka
 he saw-it a fine house. And then he went-back, then he reached the man
 léitl wēwiyēsket, sō çūtstēm: "Wá-estlēs k's-tam tlaā sō tsehēyitl."
 who-had instructed him, then he told him: "If-you desire anything you-should pray-for-it."
 Sō aúquestēm tē t'ckwēm tála. Sō çūtstēm: "Wá-estlēs kwa tála
 Then he gave him a red dollar. Then he told him: "When-you-want any money
 tla-sō tsehēyitl tlā-sō wēlih tē t'ckwēm tála tla-tca sō mē qa keq." Sō
 then pray then throw down the red dollar it-will then come to-be many." Then
 le áiyēsesem taúta swévolos, tla-tli-sō lam-kālçet qolámta tē lēs sis-amē.
 he left him that young-man, then he went-back along the trail he-had-come.
 Tlā-tli-sō tuk'swēyil. Sō k'tlham, sō lamístwes tē tsehēyitl, tlā-tli-sō mē
 And then mid-day. Then he knelt down, then he repeated the prayer, and then came
 qā tlātluq tē setltens, tlā-tli-sō wē-haīetsel sō kelāt lam émiH
 to be down the food-his, then when-he had finished then again he sets off walking
 qolám tē cqelems. Tlā-tli-sō le qolé, tlā-tli-sō émilises tē kōk
 towards the destination-his. Then he arrived-there then he went into the cook
 tlúketl kwiátltcit, sō kwélstōqwēs wē-aúquest-temet kwa sétltēn, sō
 that-used to refuse, then he asks him if he would give him some food then
 kwiátltcitēm, çūtstēm wē-lam-es áiyel. Sō lam tē lateaútūq, sō
 he refused-him, told-him he must go away. Then he-went-to the other-house, then
 cwumāl, sō aúquestēm tē sétltens, sō çut k's-aúas-lēs kwákwai.
 he begged, then he gave him the food-his, then he said that-he-was-not hungry.
 Sō kōōtes tē lētsa t'ckwēm tála, sō çutst: "aúquest ékwēla tels-aiyáket
 Then he took the one red dollar, then said: "give here my-payment-for
 tē sétltēn tlúketl es-auquest-çai." Sō wēlihēs tē tála, tlā-tli-sō mē qa
 the food used you-to-give-me." Then he threw down the dollar, and then came to be
 keq. Sō çúts-toqwēs: "Kēlem-teūq-wa! áua-teūq kwélkwel-ōq." Sō
 lots. Then he said to him: "Put-it-away-you! don't-you talk-about-it-you." Then
 lam áiyēsees. Sō lam tē lateaútūq, tlā-tli-sō qolé sō kwélstōqwēs
 he went away-he. Then he went to the other-house, then he-got-there then he asked him
 tē kōk wē-aúquest-temet, sō kwiátltcitēm çūtstēm wē-lam-es áiyel. Tlā sai-
 the cook if he-would-give-him, then he refused him told him he-must-go away. That was
 yēselis tē kwiátltcit. Sō lam tē lateaútūq, sō lam qolé, sō
 the second man refused. Then he went to another-house, then he went there, then
 p'támetem: "Léitl-teūq élitca?" Sō kwélkwel, tla-tli-sō hai tē
 he asked him: "Been-you where?" Then he told him, and then he finished the
 skwelkwel, sō aúquestēm tē sétltens, sō çut k's aúas lēs kwákwai. Sō
 telling, then he gave him the food-his, then he said that he was not hungry. Then
 Héektes tē tála, sō kwel: "ékwēla tels-aiyáket tē tluk es-aúquest-çai."
 he took out the dollar, then he said: "Here is my payment for what you-gave-me."

Sō wélihes, tlā-tli-sō mē qā keq. Sō qúts-tōques :
 Then he threw it down, and then came to-be lots. Then he said to him :
 "Kélemtēq-wa ! aúa-teūq kwelkwel-ōq." Tlā-tli-sō lam aiyel. Sō lam
 "Put-it-away-you ! don't-you talk-about-it-you." And then he went away. Then he went
 aqá-tcauq. Sō tsehéyitl tlēs te stekēyú, tlā-tli-sō kwél-tōqwes te stekēyú.
 far off. Then he prayed he wanted a horse, and then he-got-it the horse.
 Sō lam aiyel.
 Then he went away.

Translation of the above Story of the Poor Boy.

Once a poor widow lived alone with her only son. They were very poor and needy. They had eaten all the food they had, and there was only a single cow on the farm left to them. It became necessary to sell the cow in order to obtain food for themselves. Accordingly the cow was taken away and sold. The proceeds of the sale enabled them to get in a fresh supply of food. This lasted them for a little time, but soon they had eaten that too, and then they were obliged to sell the farm and house. The money thus obtained lasted them a considerable time. Just when it came to an end the widow died, and the poor lad was left alone. He was now without money, without friends, and without food, so he went to the nearest town where there were some public eating-houses. He entered one of these and asked the cook to give him some food, but the cook refused him. From there he went to a second house and begged for food in the same manner. This time the cook, who was kind-hearted, not only gave him some food, but told him to come in whenever he was hungry. The day following he went to a third house and begged for something to eat. Here he was refused, and he then entered a fourth house and begged in like manner. This time the cook was again good-natured and gave him all he could eat, and told him to come back again whenever he was hungry. Thus two had been kind and generous to him, and two had not. By means of the food he now obtained he soon grew strong and was able to go to work. When he received his wages he bought some food for himself and a shovel.¹ Then he washed his face in the river and set off walking. When he had gone a great distance his food began to fail him, and soon he has none left. He is now too far away to get back to his kind friends at the eating-house, and he grows very despondent and desires to die and end his sorrows, and so go to meet his parents again. So he lay down and went to sleep. While he slept a being like the sun came down to him. His presence caused the youth to feel warm, and this awoke him, and he saw the shining one at his side, who accosted him and asked what he was doing there. The lad replies that he is poor and hungry and friendless. Then his celestial visitor tells him to kneel down. The lad obeys and falls on his knees. The Shining One then teaches him a prayer. When the lad has learned it he is bidden to go on a journey. He sets off, but before he has gone very far he finds he has forgotten the words of the prayer, so he goes back and is taught over again. Then he sets

¹ We are not told to what use this shovel was put.

off the second time. When he gets to his destination he kneels down and says the prayer the Shining One had taught him, and when he opens his eyes behold a beautiful mansion stood before him. He now goes back to the Shining One, who tells him to pray whenever he is in need of anything. Then he gave him a gold dollar and said: "Whenever you want any money first say a prayer and then throw the gold dollar on the ground and you will find all you need." Then the Shining One left him, and the boy went back over his trail to the town again. As he went he grew hungry; so about noon he knelt down and prayed for some food, and when he had finished his prayer and opened his eyes behold the food appeared. He ate a good meal and then continued his journey, and at length arrived at the town. The first thing he did was to go to the eating-house he had called at first and ask the cook for food. But the cook again refused him and sent him away. Then he went to the second house, and here he was offered food by the cook; but he refused the gift, saying he was not hungry. Then he took out his magic dollar and threw it on the ground, saying to the cook, "Here is my payment for the food you gave me formerly," and behold the ground was strewn with gold dollars. The lad then said to the cook, "Put them away and don't tell anybody about it." He now goes to the third house and asks for a little food. Again he is refused here, and he goes away to the fourth house where the cook had been kind to him before, and who now offers him food again; but the lad thanks him and tells him he is no longer hungry, and that he is not come to beg but to repay him for his former kindness. Again he throws down his magic dollar, and again the ground is strewn with gold pieces. These he bids the cook take as payment for the food he had given him when he was in need, but charged him to tell no one about the matter. Then he went off again, and when he was alone he knelt down and prayed for a horse, and when he opened his eyes behold the horse stood ready for him. Then he mounted the horse and went away.

I have recorded this tale because it was given to me in the native tongue, and the text is interesting on account of the difference in style it displays from those given by "Casimir" and "Pat Joe," and also because it is a curious mixture of a modern fairy tale, an Indian *sōqwiám*, and a religious parable. It probably had a priestly origin. Its moral is obvious.

TE tsehéyitls TE Téiteitl Siám.

The prayer-of the Heavenly Chief.

Seátl mel léteūq lē kwā téiteitl, é-tea skwakwotetes tō mōk^u mistéūq

Our father thou-art in the heaven, it-shall-be the-looking-after by all people

TE Eswā es-kwiH yūwel-éi. TES TE-lōa yūwél siám, é-tea tō mōk^u mistéūq
the thy own thy-name most-good. Thou-art first chief, it-shall-be by all people

ē TE lē temóq steás tūq skwálawon steá TE steás temstéūq nī TE téiteitl
here on the earth done thy will even as it is done by the people in the heavenly

temóq. Aúquest-tálók te letlémutl kwā sétltel te lä wéyil. Mélkel-teūq te
land. Give us the us the food this day. Forget-thou the
seátl kel síyaís, steá t'çā mēlkeles te kel skwaiyuk-tálók te láats mistéūq,
our evil deeds, like as are forgotten the evil done to us the other people,
ē-kwámakwum tea te skwálawon-teit k's aúa-teit lam-et te kel. ē-kwes
it is-strong shall-be the will-our that not-we enter-into-we the evil. May thy
hyátlum mēt-tálók k's aúa-teit t'saset. ē-k's-steás.
care help-us that not-we fail. Let-it-be-so-done.

The composition of this prayer in the native tongue is the work of the Fathers of the Oblate Mission. It illustrates admirably the difficulty of conveying our religious ideas to the Indian mind in their own language. I give it here, with a literal translation, partly on this account, and partly because it serves in comparison with the same prayer in the Salish tongue proper, as given by Father Mengarini in his *Grammatica Linguae Selicæ* (1861), which I append also to show how great the dialectical differences are in the various divisions of the Salish stock.

ORATIO DOMINICALIS.

Cum versione litterali.

Kae l'eu l's'chichmáskat u-ku-l'zii, asku èst kuks gamènehltm; ku ktl
Noster Pater in coelo qui habitas, tuum nomen tibi ametur; tu esto
chèltlich-s esià sp'us; aszntèls ks kolli iè l stoligu: ezgaitl l's'chichmáskat.
dominus omnium cordium; tua voluntas fiat hic in terra: sicut in coelo.

Kae guizlilt iè tlgoa tlu kaesiapzínm. Kaetlkotlgoèltlilt tlu kae gulguílt, ezgail
Nobis dona hodie quod indigemus. Nobis remitte nostra debita, sicut
tlu tkaempilè kaes kolgoelltm, tlu eépl gulguílt l kaempilè kae olkschlilt ta ka
nos dimittimus (iis), qui habent debita cum nobis nos adjuva ne

keskuestm lu tèie; u kae gulguíltlilt tlu tel teié. Komi ezgail.
umquam accipiamus malum; sed nos serva incolumes a malo, Utinam ita.

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